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RAIN: Journal of Appropriate Technology

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RAIN

Journal of Appropriate Technology

NOVEMBER 1976

VOL. III, NO. 2

ONE DOLLAR



David W. Pearson

INSIDE: TOFU and MISO MAKING p.4

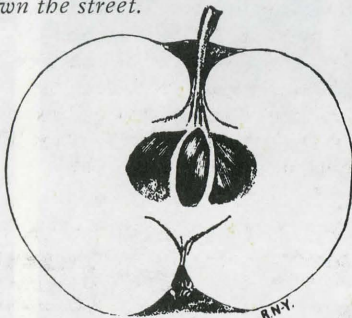
STOLEN GOODS p.10

WOOD STOVE CONSUMER'S GUIDE p.12

RAIN *access*

INFORMATION

One of my images of a vital, exciting way to live in a city is the old Italian city, where layer upon layer of homes crowded on a hillside connected by bridges and alleyways—greenspaces and courtyards popping out at you in unexpected places. And the people—mama mia!—they hang out over the balconies carrying on three-way exchanges with the street below or sit in groups in the square; children run up and down the street. Hectic and noisy, but people enjoying each other and knowing who could help them when they need it—to repair their sink, sew a graduation dress or teach geometry. Our culture and the structure of our cities and lives have conspired to deaden this sharing and caring aspect of living closely together. We rarely have contact with other people in our building, much less down the street.



A movement is afoot to try to change this. One example is the many community and service groups building tot lots, starting food co-ops and doing gardens. Another example is community resource centers and community information exchanges. They are springing up all over the place. Steve Johnson here at RAIN has been involved in setting up one in our own neighborhood of Portland—APPLE (A People-to-People Living Exchange). He'll cover more of this whole subject in future issues. In the meantime, here are a few examples of some of the more successful information exchange projects in other parts.
(LdeM)

The Learning Exchange
P.O. Box 920
Evanston, IL 60204
312/273-3383

Chicago area residents can find teachers,

tutors, discussion groups, students, speakers and action projects to share their information and talents through The Learning Exchange. There are more than 2,500 listings in topics ranging from appliqué to Virginia Woolf, and in four years more than 20,000 people of all ages and skill levels have been connected up. About half the people charge for their service, others barter or volunteer. Listing and inquiries are free, but a \$15 membership means a helpful catalogue, a special phone line and a newsletter. It sounds almost too good to be true, but it seems to be working and, I'm sure, filling a huge gap in many people's lives.

Concilio Campesino Del Sudoeste
P.O. Box 62
San Miguel, NM 88058
505/233-3153

The 2,000 mostly Mexican-American residents of this 5-town area in the Lower Mesilla Valley speak little English, have no phones or cars and are not reached by a local newspaper. The Concilio, a broadly-based membership organization, engineered \$50,000 worth of volunteer labor to build a community center, got a resident elected to the County Commission, and are now setting up a skills bank and a seller-trade directory for the community. Their tack is to use the organic communication network already in the area—priests, bartenders, beauticians, shopkeepers.

Everything for Everybody
406 West 13th
New York, NY 10014

Here's a newspaper that has a couple of branch community centers and does it for New York City. Memberships cost \$1 for a month, \$15 for 6 months, \$25 for a year, and \$1,000 for a lifetime. This entitles one to a copy of the newspaper every two weeks and free listings which, from what I saw, cover the depth and breadth of people's needs and imaginations. There are also display ads sold. It's a nice eclectic collection of things to barter, sell or do, as well as philosophy and fun. Nicely laid out—it even has a page in Spanish.

Community Information Centre (CIC)
1946 West Broadway
Vancouver, BC, Canada
604/736-3661

CIC is the central hub of a network of



very fine neighborhood information centers scattered throughout the city of Vancouver. They provide info on services and events by telephone referral, displaying of public notices and reference materials; they provide free meeting space, phones, office equipment and clerical assistance for community projects; and they help people wend their way through the maze of agencies by helping them fill out forms and giving practical or moral support in making legitimate claims for services. A visit to CIC is a marvel—volunteers busily answering phones, file drawers and card catalogues clicking, and bulletin boards crammed with interesting notices. These people know an amazing amount about their city and have worked out an effective and efficient means of making that information available to people who need it.

The Information Place (TIP)
Detroit Public Library
5201 Woodward Ave.
Detroit, MI 48202
313/833-1000

The Detroit Public Library system decided to use its considerable resources and librarian genius for locating, indexing and arranging information to take on a community information center function. It is conceived of as a live directory to all the services available (governmental and private) in the city or the state to the citizens of Detroit. TIP is available at the Main Library and at each of its branches, although the degree of referral or follow-up and advocacy varies from branch to branch. Some even do house-to-house canvassing in disadvantaged neighborhoods to make new services and programs known. It feels good to have a city library that is much more than an ivory tower that only the comfortably literate can brave.

RAIN is a monthly information access journal and reference service for people developing more satisfying patterns that increase local self-reliance and press less heavily on our limited resources.

We try to give access to:

- * Solid *technical support* for evaluating and implementing new ideas.
- * *Ecological and philosophical perceptions* that can help create more satisfying options for living, working and playing.
- * *Up-to-date information* on people, events and publications.

National Self-Help Resource Center
1800 Wisconsin Ave., N.W.
Washington, DC 20007
202/338-5704

If you want to know more about community resource centers and community information projects, get in touch with Susan Davis at this project. They are keeping track of what's happening all over the country and have put together a how-to notebook with a very complete bibliography and resource section. Write for information about its availability and watch RAIN.

APPROPRIATE TECHNOLOGY

Conserver Society News
512 Blvd. Wilfred Lavigne
Aylmer, Quebec J94 3W3
Canada

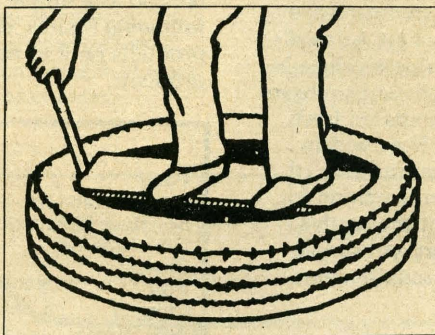
Bi-monthly, \$5/yr. for individuals, \$15 for institutions. Not to be confused (but why not?—they sound alike) with *Conserver Society Notes* put out by the Science Council of Canada, *CS News* is a grassroots newsletter for Canadians developing a society in harmony with the biosphere. It's edited by Bruce McCallum, author of *Environmentally Appropriate Technology* (RAIN, May 1975). It has inputs from reporters in almost every province and is beginning to provide a good coverage of events, projects and goings on in Canada.

The same group has set up a non-profit cooperative company, Conserver Society Products, to distribute environmentally appropriate technologies. Initial function is as a buyers' co-op, with emphasis on wood-burning technologies. Contact: Conserver Society Products, P.O. Box 4377, Station E, Ottawa, Ontario, Canada. (TB)

First Steps in Village Mechanization, by G. A. Macpherson, 1975, from: Tanzania Publishing House
P.O. Box 2138
Dar Es Salaam, Tanzania

A handbook prepared for cooperative development villages in Tanzania. How to start from nothing except people and the things around them and finish in 4 to 5 years with village workshops producing equipment for agriculture and other rural activities. Selection of

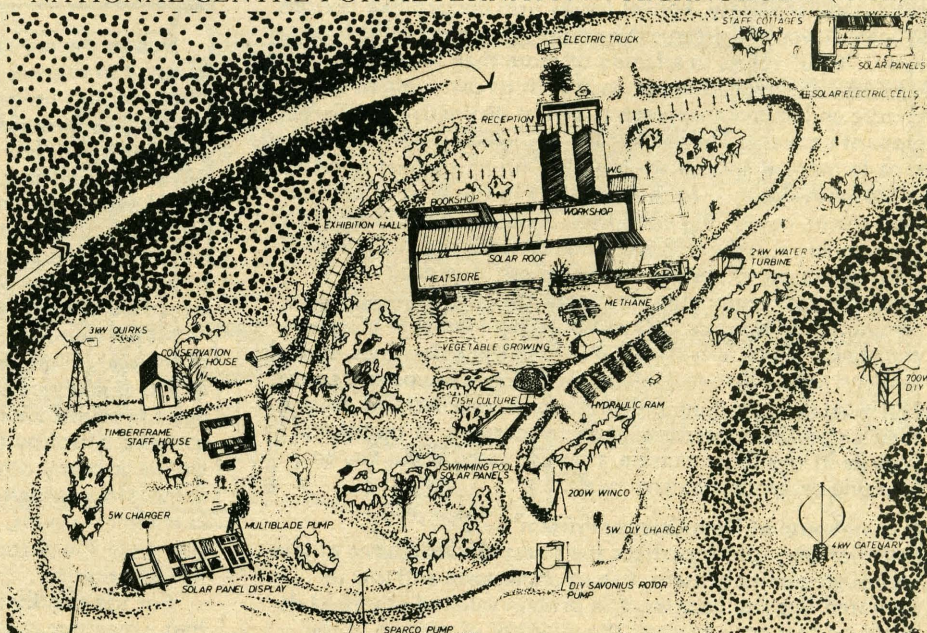
trainers, starting and managing a co-operative workshop, producing workshop equipment and tools, making furniture, village transport, agricultural equipment and training donkeys and oxen. A fine, clearly illustrated, step-by-step guide with good design drawings, especially notable for its commonsense advice on things like how a tractor may harm a village and warnings about the effects of free aid money. Of value to overdeveloped countries for its simple and straightforward advice on doing things: don't start with a workshop building—build a bench under a tree; don't build a jig for holding wheelbarrows during construction—dig a hole for the wheel and work on the ground; don't cut the tread off an old tire to make a wagon wheel—stuff planks into the tire and build the wheel inside it! (TB)



National Centre for Alternative Technology
Llwyngwern Quarry
Pantperthog
Machynlleth
Powys
Wales

I had to mention these folks because my tongue had a spasm trying to pronounce their address and I wanted to see if our typesetter would go berserk typing it (she didn't). Alphabet soup addresses aside, what these folks have been doing in Great Britain is an important element in developing any new patterns. They've set up a demonstration center for alternative technologies where people can come see, kick, shake, try out and get a feeling for the reality of things like compost toilets, windmills and solar heaters. Very few people can visualize that sort of thing without seeing it, and seeing it puts it into a category of reality right along with the traditional options they're familiar with. This British center has had more than 50,000 visitors this year, Farallones Urban House has 150 visitors every Saturday, and new understandings of what's happening are spreading like wildfire. Inquire about the Center's series of Do-It-Yourself (DIY) plans for windmills, waterpumps, etc. (TB)

NATIONAL CENTRE FOR ALTERNATIVE TECHNOLOGY (U.K.)

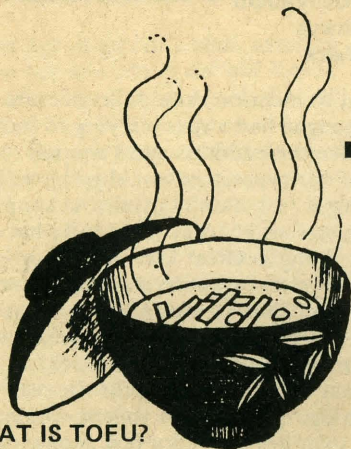


Sometimes all the pieces of a puzzle come together in a very fine way, delighting our minds' search for wholistic patterns. It happened the other day when Bill Shurtleff and Akiko Aoyagi walked into the RAIN House bearing copies of their *Book of Tofu* and *Book of Miso* and a vision that links together world food utilization, good eating, cottage industry, local self-reliance and a Zen way of thinking. They are a fine example of what a couple of people can do with a strong purpose and lots of well-directed energy and generosity.

An initial love of tofu and curiosity about its making led to research in Japan, the writing of two very fine and thorough books on tofu and miso (see below), and to a resulting mushrooming of interest in these protein-rich food products. Bill

and Akiko have set up the New-Age Foods Study Center to help carry out their work and now divide their time between networking here to help development of tofu and miso-making and studying and writing in Japan about food processing techniques.

Bill is learning the new art of sea farming—the cultivation of a wealth of vegetables common to the Japanese diet—nori, wakame, kombu, agar, kelp and more. They have also discovered that kuzu, a valuable delicacy in Japan, grows wild all over the Southern part of the USA, where it is presently considered an uncontrollable pest. They are planning a book on the full story of using kuzu in cookery and natural medicine, as well as employing the plant for fodder, fertilizer and erosion control. (LdeM)



WHAT IS TOFU?

Tofu—also known in the West as bean curd or soybean cake—has been the low-cost protein backbone of the East Asian diet for more than 2,000 years. Discovered by a Chinese prince in 164 B.C., tofu is presently the single most important soybean food for more than one billion people and is prepared fresh each morning at 38,000 shops in Japan alone. Now widely available across America, tofu is the answer that millions of nutrition- and cost-conscious people have been searching for. Natural and inexpensive, it makes fullest use of the earth's nutritional resources—and offers a revolutionary yet simple approach to meeting the world's critical food requirements.

A Family of Distinctively Varied Foods

For many of us in the West, the word "tofu" refers to the most popular variety, known for its firm custard-like texture, delicate flavor and cream-white color. However, in its broader sense, "tofu" refers to a family of more than fourteen different high-protein soybean foods, each with its own unique flavor, texture and appearance; each suited to distinctively different types of cookery. The various forms include deep-fried, grilled, wine-fermented and silken-smooth tofu, plus a host of others, as shown in figure 1. Each is available in the West at natural food stores, co-ops, supermarkets, Japanese and Chinese food markets, or, at reduced rates, directly from the more than 55 tofu shops now in operation throughout America.

These tasty and highly nutritious tofu products are versatile enough to become indispensable ingredients in many of your favorite Western-style dishes, including dressings, spreads, dips and hors d'oeuvres; salads, sandwiches, soups and sauces; egg, vegetable and grain preparations; barbecued and deep-fried specialties, casseroles, and even desserts. A traditional favorite in vegetarian cuisine, tofu can serve as the key to planning delicious meatless meals.

A Storehouse of High-Quality Protein

Nutritionally, tofu is perhaps the finest known source of low-cost, high-quality protein, free of cholesterol and low in saturated fats and calories. The protein value of any food depends on two basic factors: the *quantity* of protein in the

TOFU and MISO

EATING HIGH AND LIGHTLY

food and the *quality* of that protein. Quantity is usually expressed as a simple percentage of weight. By comparing the following figures, it can be seen that tofu and other soybean products rank at the top of the list—ahead of meats and dairy products.

Food	% Protein By Weight	Food	% Protein By Weight
Dried-frozen tofu	53	Tofu burger (ganmo)	15
Soy flour (defatted)	51	Hamburger	13
Dry soybeans	35	Eggs	13
Cheeses	30	Chinese-style tofu (doufu)	11
Fish	22	Tofu cutlets (thick agé)	10
Chicken	21	Tofu	8
Beef (steak)	20	Brown rice (uncooked)	6
Tofu pouches (agé)	19	Milk (whole)	3

Due to the principle of protein complementarity—explained in detail in Frances Moore Lappé's best-selling *Diet for a Small Planet*—tofu's unique amino acid composition makes it not only a basic protein *source*, but also a truly remarkable protein *booster*. Since tofu contains an abundance of lysine, an essential amino acid that is deficient in many grain products, the use of even small amounts of tofu together with these cereal foods can produce large increases in usable protein. For example, by serving only 2¼ ounces of tofu together with 1 cup of brown rice, we obtain 32 percent more protein than if we served these foods separately.

A rich source of calcium, tofu provides about 38 percent of the daily requirement per 8-ounce serving and has therefore served as a key calcium source in countries and diets where dairy products are not widely used. It is also rich in iron and contains a healthy balance of vitamins and other minerals. Unlike so many other high-protein foods, tofu has an alkaline composition which promotes long life and good health. Low in chemical toxins, tofu and soybeans have only about one-twentieth the pesticide levels found on the average in meats, fish and poultry.

For the rapidly increasing number of Westerners who find that a meatless or vegetarian diet makes good sense—whether

from an economical, ecological, religious, health or humanitarian point of view—tofu can serve as the basic source of protein just as it has since ancient times for the millions of vegetarians throughout East Asia where it has come to be known as the “meat of the fields” and “meat without a bone.”

from “What Is Tofu?”



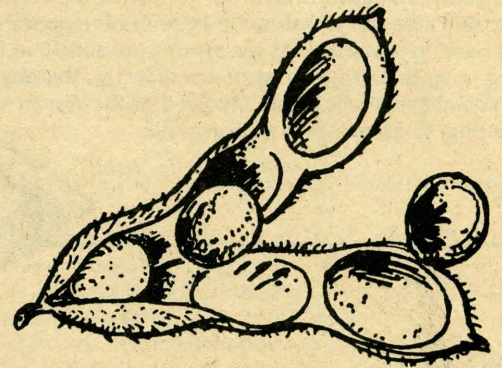
WHAT IS MISO?

Miso, or “fermented soybean paste,” is one of East Asia’s most important soybean foods. An all-purpose, high-protein seasoning and basic staple, it is used in many of the same ways that we in the West use salt.

Delightfully Varied; Highly Versatile

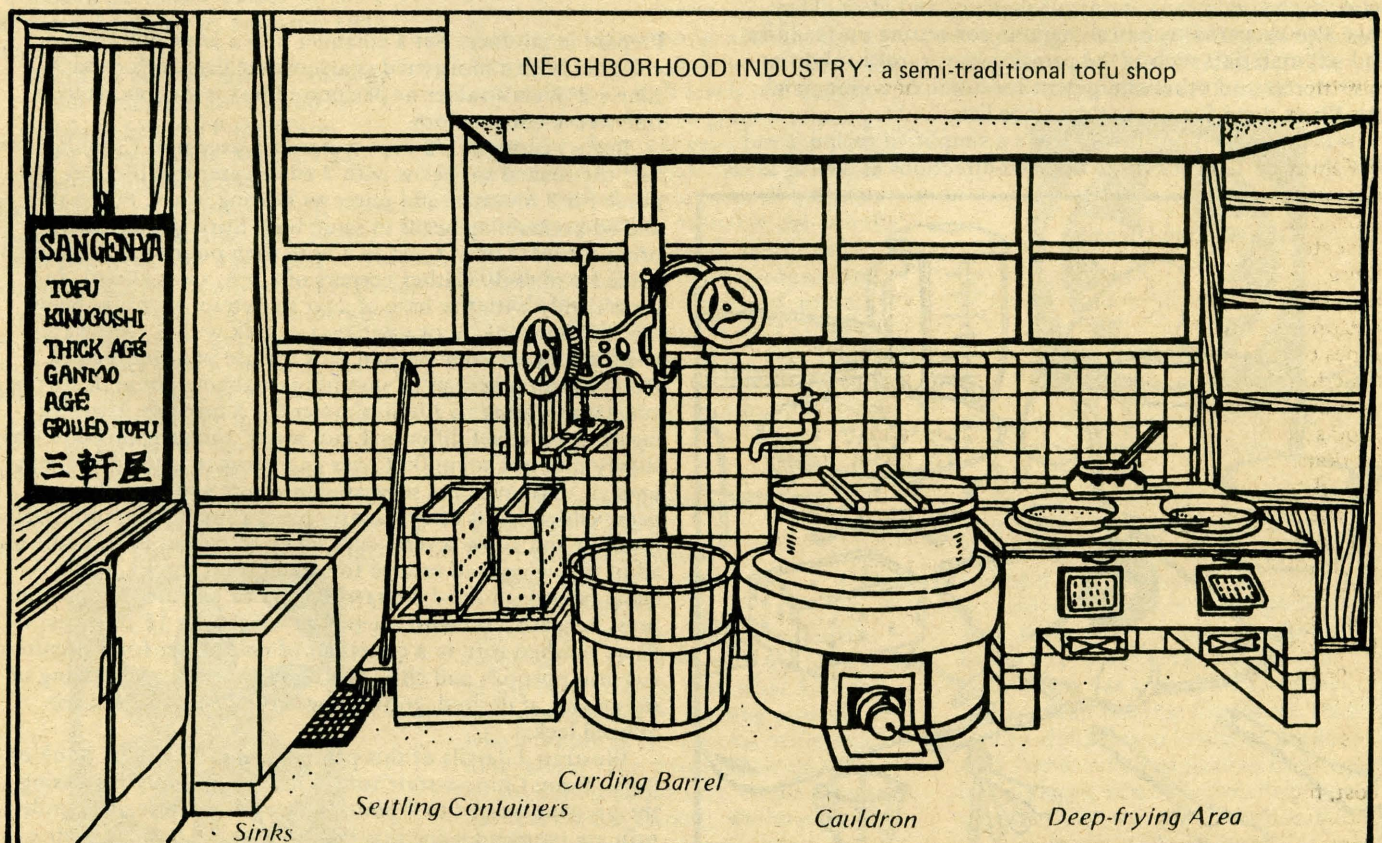
Miso has no equivalent among Western foods or seasonings. Its smooth or chunky texture resembles that of a very soft peanut butter, or a firm cottage cheese. The most widely available and traditional of the many natural varieties come in warm, earthy colors ranging from tans and russets through deep ambers and rusty reds to rich chocolate browns and loamy blacks. More modern varieties come in sunlight yellows and creamy beiges. Each miso has its own distinctive flavor and aroma, which, for the darker, more traditional varieties, is savory and sometimes almost meaty, while for the lighter-colored types it is subtly sweet and delicately refreshing. To the sensitive palate, no two varieties of miso taste the same; the range of flavors and colors, textures and aromas is at least as varied as that of the world’s finest wines or cheeses.

Miso is prized by cooks for its almost unlimited versatility. It can be used like bouillon or a rich meat stock in soups and stews; like Worcestershire, soy sauce or ketchup in sauces, dips and dressings; like cheese in casseroles and spreads; like chutney or relish as a topping for grains or fresh vegetable slices; as a gravy base with sautéed or steamed vegetables; or even like vinegar as a pickling medium. Used in many of these ways for centuries in Japanese kitchens, it has set its distinctive mark of deep, rich flavor on the entire panorama of Japanese cuisine and added zest and variety to a diet which has long consisted primarily of grains, land-and-sea vegetables and the many varieties of tofu.



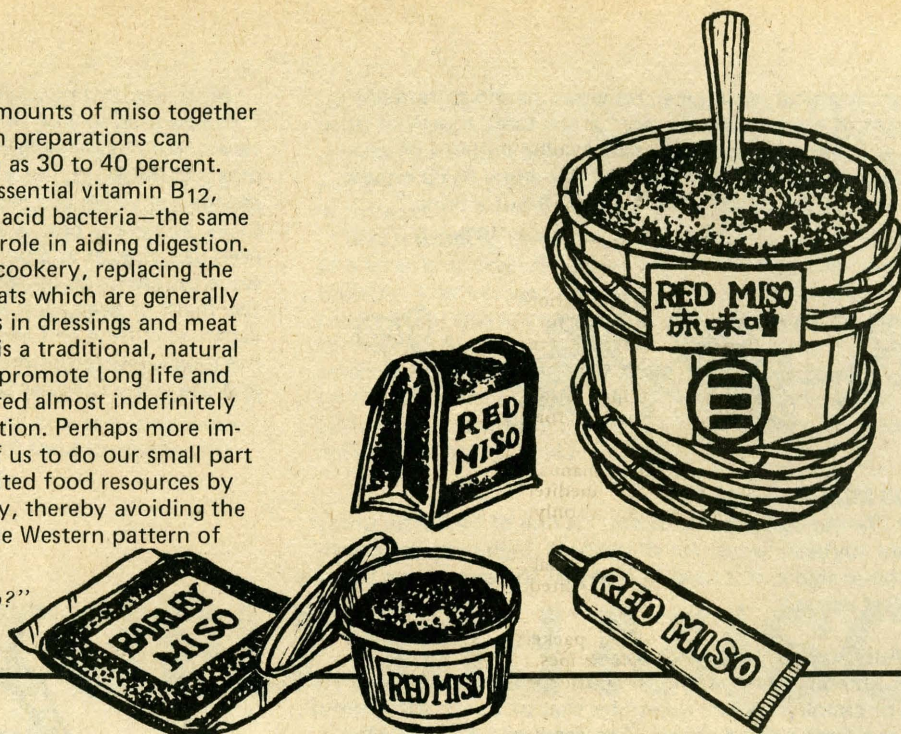
A Nutritional Treasure Trove

Miso is a remarkable source of essential nutrients, especially high-quality protein; the average amount of protein in all varieties is about 13 percent, and the maximum approaches 20 percent. These figures compare very favorably with chicken (21%), beef or cottage cheese (20%), hamburger or eggs (13%), and whole dairy milk (3%). Miso is also a powerful protein booster due to its abundance of the very amino acids lacking



in most grains; the use of only small amounts of miso together with rice, bread, noodles or other grain preparations can boost the available protein by as much as 30 to 40 percent. One of the few vegetarian sources of essential vitamin B₁₂, miso is also rich in enzymes and lactic acid bacteria—the same as found in yogurt—which play a vital role in aiding digestion. And it can serve as the key to low-fat cookery, replacing the need in Western cookery for oils and fats which are generally employed to soften salt's sharpness—as in dressings and meat dishes. Low in calories and cost, miso is a traditional, natural food considered by many Japanese to promote long life and good health. Easy to use, it can be stored almost indefinitely at room temperature without refrigeration. Perhaps more important, the use of miso allows each of us to do our small part in making better use of the earth's limited food resources by enjoying soy and grain proteins directly, thereby avoiding the colossal and tragic waste involved in the Western pattern of feeding these proteins to livestock.

from "What Is Miso?"



MAKING IT

Traditional tofu shops in Japan—like so many operations there—are a perfect example of small-scale, neighborhood-based cottage industry. The process is relatively simple, requiring a minimum capital investment, and, as the new tofu shops springing up in American communities will attest, the market is growing daily as we switch from our meat-centered diet to “eating high and lightly” (see RAIN, January 1976). Bill and Akiko have been amazed and pleased at the increasing level of interest in miso and tofu-making. At the New Ages Foods Study Center, they have a list of existing shops and can send you to one near your area for advice and ideas. They have also prepared technical manuals for setting up facilities and sell materials such as the pressing boxes, tofu solidifier, miso starter and other equipment for home or commercial use. Write them for a complete price list.

Want to make your own? Here's a simplified recipe. Read *The Book of Tofu* for more detailed directions as well as ideas

for using it. The Learning Tree, Box 620, Occidental, CA 95465, makes a nice little kit with a pine pressing box which they sell for \$11.95 (\$7.77 wholesale).

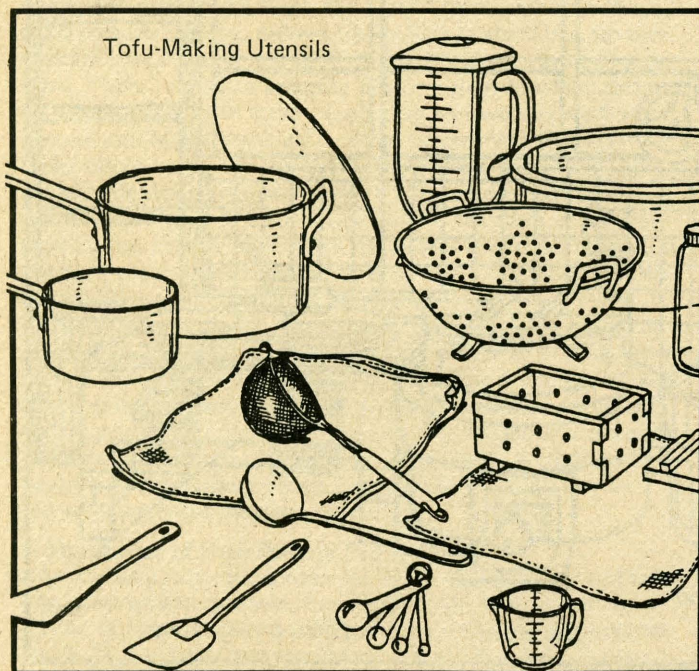
Homemade Tofu

1-1/2 cups dry soybeans, washed, soaked in 6 cups water for 10 hours, rinsed and drained
16 cups water, approximately
1-3/4 to 2-1/4 teaspoons granular *nigari* (bittern) or Epsom salts; or 1/4 cup lemon juice or vinegar.

Prepare in advance: Set a colander into a large pot and line colander with a moistened coarse-weave dishcloth or sack. Line a 2-quart strainer or perforated box with a moistened fine-weave cotton cloth.

Begin heating 7-1/2 cups water in a large pot. Combine one-half the soaked soybeans with 2 cups water in a blender and puree for 3 minutes; add puree to heating water. Puree and add remaining beans in same way. Stirring constantly, bring contents of pot just to a boil, then pour into cloth-lined colander or sack. Gather corners of cloth, twist closed, and press firmly with the base of a jar to extract soymilk. Now mix the pulp (*okara* or *unohana*) in sack with 3 cups water, re-press and set aside pulp in sack for use in other recipes. Return both pressings of soymilk to cooking pot and, stirring constantly, bring to a boil; simmer for 5 minutes. Dissolve *nigari* or other solidifier in 1 cup water, then stir mixture very slowly into hot soymilk. Cover and allow to stand for 3 minutes, or until milk has separated into soft white curds and pale yellow liquid whey. Gently press a small fine-mesh strainer into pot and allow several cups whey to collect in it. Ladle out all of this whey and reserve for use in soup stocks. Ladle curds into cloth-lined 2-quart strainer or perforated box and press beneath a lid with a 1-pound weight for 15 minutes. Place finished tofu in a container of cold water for 3 minutes, cut into portions and chill. Serve topped with a sprinkling of *shoyu* and, if desired, grated gingerroot, crushed garlic or minced leeks.

Illustrated details of this process are given in *The Book of Tofu*. Firm, Chinese-style tofu is made by simply increasing the pressing weight to 4 pounds. Deep-fried, frozen or grilled tofu are prepared using this firm tofu as the basic ingredient.



Publications by Shurtleff & Aoyagi available from:

New Age Foods Study Center
790 Los Palos Manor
Lafayette, CA 94549

The Book of Tofu: 500 recipes, 300 illustrations, 336 pages, 8-1/2 by 11-inch large format. Contains instructions for preparing each of the seven basic types of tofu as well as soymilk, tempeh, yuba and other soy products. (Autumn Press, \$6.95).

The Book of Miso: 400 recipes, 300 illustrations, 256 pages, 8-1/2 by 11-inch large format. Contains instructions for preparing many types of miso. (Autumn Press, \$6.95).

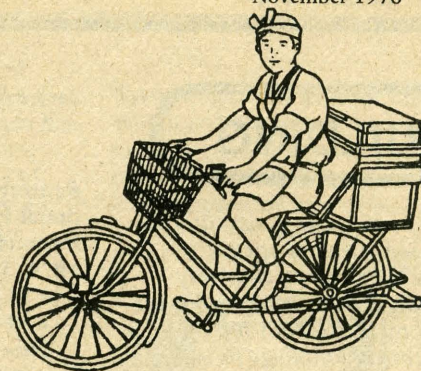
The Book of Tofu, Vol. II: A technical manual for starting a commercial tofu shop. 122 pages, typewritten, unedited, 8-1/2 by 11-inch large format, staple-bound, basic chapters only. Offset printed; \$12.95 each.

The Book of Miso, Vol. II: A technical manual for starting a commercial miso shop. 45 pages, typewritten, unedited, offset printed, legal size, staple-bound. \$3.50 each.

Pamphlets: Ten pages, accordion-folded, packed with information, illustrations and favorite Western-style recipes. Special prices for quantity orders. *What is Tofu? What is Miso? What is Shoyu?* (coming soon), 15¢ each.

Tempeh: A 1-page brochure taken from *The Book of Tofu* describing how to prepare this savory fermented bean food. 25¢ each, 10 for \$1.50.

Tapes: Recorded live at lecture-demonstrations in America. Audio cassettes, 120 min., Tofu, Miso, \$5 each. Color Video, 30 min., Tofu, Food for Mankind, \$10 rental plus \$30 deposit.



Bill and Akiko are presently traveling around the country talking to a wide variety of groups about miso and tofu and explaining some of the basics of setting up small-scale, local production of these foods. If you want to see them, here are a couple of key contact places on the East Coast. (Sorry, Pacific NW! We caught them at the very end of their trip in this neck of the woods):

November 11-21: Erewhon Natural Foods, 33 Farnsworth St., Boston, MA 02218, 617/542-1358.

December 1-5: Annamarie Colbin, East West Center, 365 West End Ave., New York, NY 10024, 212/244-4270.

December 15: Michael Rosoff, East West Center, P.O. Box 40012, Washington, DC 20016, 202/920-2083.

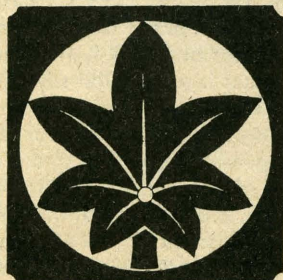
For a complete copy of their schedule through January, including the rest of the Northeast, South, Colorado, New Mexico and California, write: New Age Foods Study Center, 790 Los Palos Manor, Lafayette, CA 94549, 415/283-3161.

AGRICULTURE · FOOD

Underexploited Tropical Plants with Promising Economic Value, by the National Academy of Sciences, 1975, free from:

Board on Science and Technology
for Industrial Development
National Science Foundation
2101 Constitution Ave., JH 215
Washington, DC 20418

This belongs on your bookshelf next to *Forest Farming* (RAIN, July 1976), *Good and Wild*, and *Butterflies in Your Stomach* (RAIN, October 1976). Underexploited is probably a good category to be in if the other options are Extinct, Exploited and Over-Exploited, but it's definitely our loss that we have tried to feed the world's people with only about 20 plants. We have an incredible range of soils and climates, and these 20 plants form a pretty small bulwark between us and starvation. Diversity has benefits, and this study lays out



some astounding potentials we've overlooked in the rest of the plant kingdom—in tropical areas alone! Cultural colonialization and balloon bread may be good for some but not for all. Try these for a sampling: a wild Australian grass that yields nutritious grain on just one deep watering; amaranthis—a Central American grain with high yields and extremely high levels and quality of protein; zostera—a grain-producing grass-like plant that grows in sea water; arracacha—a Peruvian “parsnip” often grown instead of potatoes, at half the cost; mangosteen—probably the world's best-tasting fruit; plants that grow through salt crusts on the ground; and gourds that produce more oil, protein and starch on the desert than most crops do with plentiful rainfall. This list goes on and on. An important pathfinder for future agricultural directions. (TB)

Council on the Environment of New York City (CENYC)
51 Chambers Street
New York, NY 10007
212/566-0990

CENYC is a privately-funded citizens organization affiliated with the Office of the Mayor. They have what look to be a whole lot of interesting projects which we are in the process of finding more about. The information on them we do have is about their Green Project, directed by Liz Christy, which is providing planning and horticultural assis-

tance to community-sponsored projects in the city. They give workshops, distribute handy information sheets and have a Mobile Greening Unit, complete with tools, that gives on-site advice and instruction on soil preparation, planting, garden maintenance, tree and plant selection, design and neighborhood organization. They also have a Garden Tool and Book Lending Library. (LdeM)



Farms of Puget Sound, 1976, free from:
Preserve Land for Agriculture Now
P.O. Box 5501
Seattle, WA 98105

This is the niftiest thing we've seen yet to make good fresh produce available and help out the small farmer. One side is a listing of farms in the Puget Sound area, along with the address, phone, listing of products, dates and times. Each listing has a number. The other side is a map locating the farms. There's also an alphabetical listing of produce with farms' numbers next to each vegetable. Simple and effective. First printing of 35,000 was gone in a month. (LdeM—thanks to Mark Musick)

REBUILDING

Things usually change so gradually that we have to keep our eyes open if we want to know when we're suddenly into a new ballgame. Everyone who has been angered by the demolition of beautiful historical buildings to make way for parking lots and fast food chains will be happy to know that we seem to have passed from conditions that encourage such waste to conditions that encourage restoration, renovation, preservation, caring and adapting. Even small buildings are now being disassembled rather than demolished, old neighborhood buildings and homes are being fixed up and upper stories reoccupied. And suddenly a rash of new resources appears for renovation and reuse of old buildings. (TB)



Economic Benefits of Preserving Old Buildings, National Trust for Historic Preservation, 1976, \$5.50 from:

The Preservation Press
1729 H Street, N.W., Suite 300
Washington, DC 20006

Escalating construction costs have made the rehabilitating of old buildings economically advantageous. The U.S. General Services Administration has testified to Congress that saving an old building employs five times as many people as building a new one of the same size—a figure verified by labor organizations. Preservation results in economic use of energy and materials, and many old buildings were designed expressly for natural daylighting, ventilation and thermal control that are again becoming desirable. These conference proceedings detail the experiences of many architects and developers spearheading rehabilitation practices—economics, financing problems, structural and architectural restoration, and adaptation to new uses. Their successes offer handsome evidence of the value of preservation, though warning notes are sounded against the transi-

tory value of chic “formula” antiquing and commercial/nostalgic restorations.

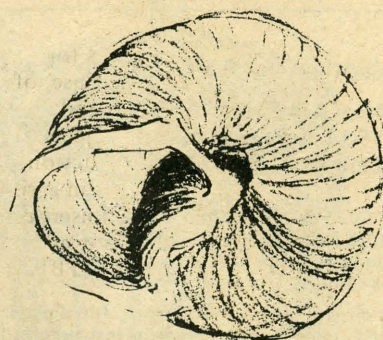
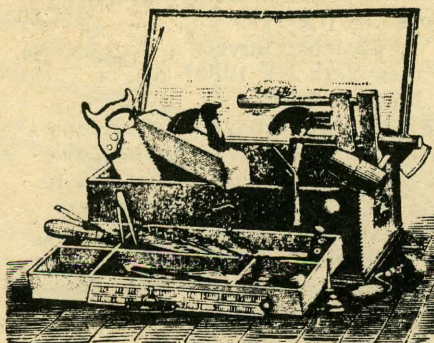
Reusing Railroad Stations, by Educational Facilities Laboratories and the National Endowment for the Arts, 1974, \$4 from:

EFL
850 Third Ave.
New York, NY 10022

Over 40,000 railroad stations have been built in this country since 1830. 20,000 still stand, but few will see another passenger train unless massive increases in ridership and financial support for rail travel again develop. Many fine and useful buildings have already been lost to the wrecker's ball because of an inability to assemble new occupancy, financing and interest in rehabilitation. This study documents the availability of fine and usable structures, the apathy and antagonism of many railroad companies, and, more heartening, a wide range of successful conversions to other uses—art colleges, shopping centers, homes, offices, nursery schools and even a bank.

The Restoration Manual, by Orin Bullock, Jr., 1966, \$12.95 from:
Silvermine Publishers, Inc.
Norwalk, CT 06850

The sleuthing involved in analyzing and restoring old buildings is almost as esoteric as collecting Nepalese snuff jars, but it is frequently necessary and useful for restoring the beauty of fine old buildings buried under a patina of misuse, vandalism and destructive “modernization.” A whole new world of beauty can open up when you see a 17th century Persian garden pavilion emerge from beneath the French Rococo plaster that had covered its exquisite polychrome and gold vaulting and faceted mirrored domes for 200 years. This manual outlines the basic procedure for historical, archeological and architectural research, execution of a restoration, climate control in restored buildings, use of photogramming and other sneaky techniques.



The Old House Journal
188 Berkeley Place
Brooklyn, NY 11217
212/636-4514

\$12/year (monthly). Subtitled “Renovation and Maintenance Ideas for the Antique House,” here's the journal that will keep you up to date on how to do it. Preserving exterior woodwork, Gothic decoration in the American house, patching up your old piping, refinishing old floors, and more. There's also a yearly *Buyer's Guide* (\$5.50) with sources for hard-to-find products and services. Encouraging to see that it's still possible to find handmade bricks, exterior cornices, Victorian door handles and gingerbread trim, and that people are putting loving care into preserving and enhancing the legacy given us by past generations.

WATER

Water Conservation in California, Bulletin 198, May 1976, free from:

State of California
Dept. of Water Resources
P.O. Box 388
Sacramento, CA 95802

Water may seem too plentiful to be concerned about, but it is getting scarce in many places as population density, industrial and irrigation demands increase. Massive shortages may be seen in the near future in some areas. It also costs a lot of money to drain, purify and distribute and to process again as sewage. We often feel hesitant to implement residential water use reduction because some people feel it just makes more available for wasteful industrial or agricultural practices. California has had an early taste of these conditions in the last few years and this report has some hard figures on how water is used, what savings can be obtained and what measures were possible to obtain them. 85% of all state water use is agricultural, 0.1% is for power plant cooling, 2% for fish and wildlife and 13% urban. 68% of the urban use is residential, 14% commercial and governmental and 18% indus-

trial. 44% of the residential use is for landscaping and 55% for interior use, of which 42% is used by the toilet and 32% by the bath. The report projects 50% water savings in new construction, 38% in existing buildings, 5-10% in agriculture. Case studies of water conservation in industry are presented but no projections of statewide effects. (TB)



Residential Water Conservation, by Murray Milne, 1976, \$7.50 from:

California Water Resources Center
University of California
Davis, CA 95616

Best available source on water conserving hardware for the home—diagrams of equipment available, description of operation and economic analysis of

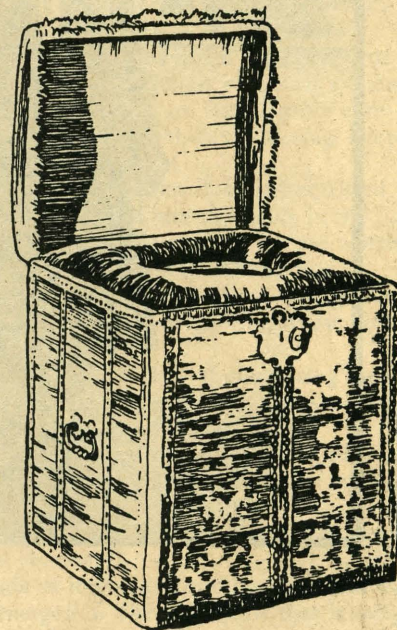
savings and costs involved. Directory of manufacturers for toilets, bathing, drinking, washing, outdoor uses. Dry and low flush toilets, code changes and hot water use reduction are not covered well, but it is comprehensive and extremely useful in other areas. (TB)

Clean and Decent, Lawrence Wright, 1960, \$2.95, from:
University of Toronto Press
33 E. Tupper St.
Buffalo, NY 14203

A fascinating history of the bathroom and the water closet, through which flow 75% of our home water use. Our phobias, fantasies and dalliances make interesting reading once we're free enough from them to view them with humor. They provide useful insights for rethinking good and enjoyable ways to accommodate our various bodily needs and desires. Lots of interesting and peculiar data here: Roman hot water heaters, Queen Elizabeth I's valve water closet, Louis XIV's cushions in his bath, washbasins in pianos and baths concealed in sofas, and the sex life of sponges. But also absorbing insights into how different our sense of what is clean, decent and enjoyable has been at dif-

ferent times. Our attitudes towards toilets and sewers and bathing are going through some big changes—and hopefully some satisfying and resourceful new patterns are emerging. (TB)

NO ROYAL FLUSH



News from TILTH

The last month has seen a flurry of activity, trying to get as much work done as possible before the rains set in again. Cover crops have been planted on all the open fields to get them ready for winter, I'm in the midst of repairing the water system for the main cabin, and we're getting ready to build another living cabin with hopes of having it completed by Christmas. Cabbage harvest has been going on for several weeks, with a truckload going in to Community Produce in Seattle every Monday. Unfortunately, we over-planted on the early varieties of cabbage, so we are hustling around for alternative buyers for our excess and taking whatever prices we can get. It's sure a good way to learn the business.

There have been a lot of people changes on the farm. We've had lots of visitors and people coming and going. Davis spends most of his time in the city working on Ecotope projects these days. Woody decided awhile back that



he wanted to return to school to get his teacher's certificate in agricultural education. He left for Pullman a week ago. About the time that he was getting ready to leave, my younger brother, Murphy, moved to the farm to spend a few months helping us build the new cabin. So far, at least, we've been get-

ting the help when we need it and, although there is an impossible amount yet to be done, a great deal has been accomplished.

The big fancy greenhouse with the experimental fishes that was supposed to have been built in 3-1/2 weeks still isn't completed yet. It looks real pretty, though. And the smaller system is full of fish and working beautifully. We had the first official "open house" to show off the systems two weeks ago. It was a perfect day. We erected a Japanese fish kite with streamers flying off a twenty-foot pole next to the parabolic greenhouse. All the flowers were brilliant in the bright, bright sunlight, and the fifty or so people who showed up had a wonderful time. It really went well.

Although it's a real struggle, we are all doing well. I hope it's the same with all of you. Give my love to everyone.

Mark Musick
Pragtree Farm
Rt. 2, Box 190-A
Arlington, WA 98223



Penny Johnson

STOLEN GOODS

by Tom Bender

We often complain about having to pay too much for things, but do we ever complain because we have to pay too little for something?

Can things cost too little?

When someone stops us on the street and offers us a TV or watch or stereo at a really low price, the first thing that pops into our heads is: "Is it HOT?" Our intuition always warns us that when something costs a lot less than it's supposed to, there is probably something funny going on.

We think about stolen goods when someone offers us a "deal" on the street. But do we think about stolen goods when we find a "bargain" at a supermarket, a discount plaza or an import store? Do we think about stealing from our children when we go to the gas station? Yet we buy gasoline that is cheap because we're pumping out the energy savings of millions of years so rapidly that none will be left for our own future or for our children.

When we buy fresh produce from California in the supermarket, do we realize we are likely buying goods that are produced illegally? Is it less wrong to buy illegal goods from a "Safeway" than on the street? Much of California's produce comes from the Central Valley, where vast corporate farms operate with flagrant disregard of federal and state laws limiting use of irrigation water to 160-acre family farms. And much of the produce is picked by illegal immigrants in violation of immigration, tax and employment laws. Is it stealing

when a company that monopolizes food processing sets impossible quality criteria for produce of small independent farmers, then buys their crop cheap because there are no other buyers to whom they can sell?

How do we know if prices for things are low because they are being *dumped*? It's not uncommon for large producers to sell some items below cost to drive out their small competitors who produce more efficiently but can't afford large losses. And how can small farmers compete with corporate farming that *wants* to operate at a loss for tax writeoffs?

Imports also can be too cheap when our trade arrangements and energy sources exploit the workers of other countries (RAIN, May 1976). How would we feel if our country had no source of cheap fossil fuels and another country started to sell fossil-fuel-produced goods in our country so cheaply that we were all put out of work? We would end up having to work for starvation wages to compete with such cheap energy sources and stay alive. Is it right to purchase goods that support such an exploitative relationship?

So what if we do buy stolen goods, or illegally-produced products, or goods that are produced by exploitation? The major problem, it seems, is that when someone loses, someone else gains. *Someone* gets rich off of "stolen goods"—either the buyer or an intermediary or both. When wealth accumulates, power accumulates—whether we speak of large corporations vs. individual Americans or U.S. citizens vs. the

rest of the world. And the more that power is concentrated, the less possible it is to sustain the principles of democracy and equality that our country was founded upon and which are necessary to the kind of society we wish to live in. Buying stolen goods contradicts those principles we claim to believe in and follow, and either we must change or they must.

Whether or not we eventually buy a "hot" TV hinges not only on whether we will get caught, but also—on some level—on a realization that supporting a market for stolen goods increases the odds that sometime we may become the source for such stolen goods.

Chickens always come home to roost one way or another. Exploitation of others eventually comes full circle—if not through rebellion, then through disease—if not through disease, then from atrophy. Wealth insulates and isolates, and, removed from the continual probing and testing of real forces of life, our information and judgment fail to keep us within the limits of the game. (Our Drain America First energy policy is a good example of this kind of failure.) While we become wealthy off of other countries, we are in turn exploited and controlled by the power and wealth of our large institutions.

Though we claim and often act otherwise, our purchasing decisions are never based on economics alone. Our so-called economic decisions always occur within limits set by ethics, morals and other social values. We require things to be Union Made. We don't allow child labor. We set the rules on corporate taxes, patents and monopoly that become the rules of the game within which economic trade, survival and success occur. Such ethical frameworks are essential and are more basic than profit or economics because they enable the continued survival and health of the resources, environment, social fabric and personal judgment necessary for our survival and well-being.

The separation of our ethics and our actions has occurred in part because our production and exchange processes are so complex and large that we are isolated and distant from where goods may have been "stolen." Without knowing what occurs or sensing the effects, we have less and less reason to trust our ethical judgment. We're also so wealthy ourselves, as a country, and so unused to doing things ourselves that we often have little sense of value and costs.

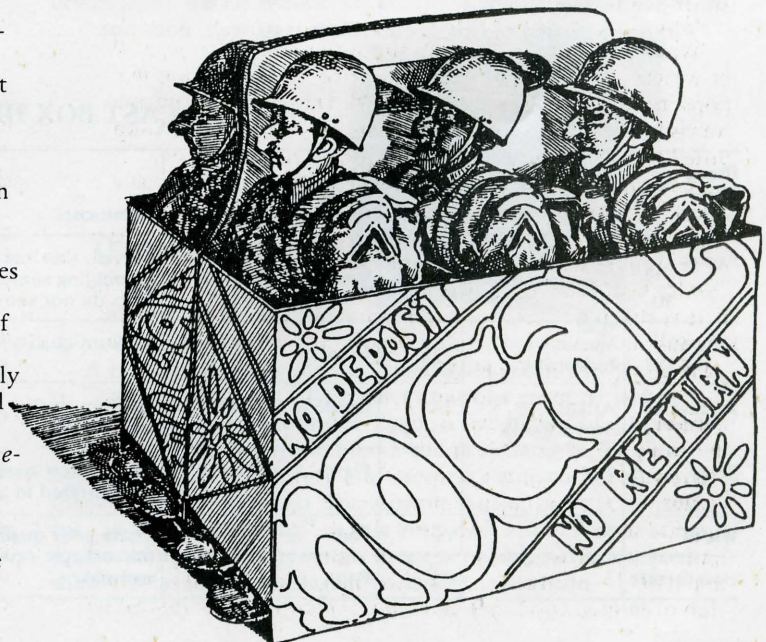
"Marked" prices, standardized goods, changing prices, take-it-or-leave-it buying, and prices totally determined by someone else are so universal that we have very little sense of what we're getting for what we pay or what is fair exchange. We don't know *what* we're getting (poly-epoxyl who?), if profit on it is excessive, if taxes were paid, if someone was unfairly paid for making it, if externalized costs were accounted for in its price. And things really *have* been changing so rapidly it's difficult to judge prices. New technical processes produce things more cheaply, but inflation and exhaustion of resources cause prices to swing erratically upwards.

Not only do our economics become confused as a result of all this, but our relationships with other people are harmed. Because we don't know what a fair deal would be, we can only assume that the less we can get something for, the better deal we got. But even then we're uncertain that the other person knows something we don't and we might get taken. And *someone*, it seems, is supposed to get the best deal out of an exchange. Our exchanges rarely give us good feelings towards the people we exchange with. We never end up thankful to other people or wishing to do something nice for them in the future in exchange for what they did or gave us.

All these things tie back to our not knowing what's happening, and so do ways of changing the situation. There are lots of things we can do:

- Reduce the scale of organizations. A small and knowable scale of production is the best insurance against not knowing what's happening. Present regulations discriminate heavily against small but efficient producers.
- Open financial records. Seeing how much a merchant or producer pays and gets for their products pinpoints avoidable expense and profit. More businesses are feeling more comfortable with people knowing rather than wondering. People act differently, too, when they know!
- Encourage local auctions, exchanges, flea markets, used goods sales. They will be more and more valuable in the future, are fun, and are good places to learn what things are worth. They have been regulated away in many communities.
- Exchange with friends and people you know—and *give* more than required. It will usually come back with interest. Remember the baker's dozen.
- Make and do things ourselves instead of purchasing them. Do real and varied work. We can save money, taxes and reduce the GNP while learning the worth of things.
- Get poor—live simply—and avoid the rush later. Reducing desires instead of satisfying them helps get us closer to reality and to the worth of things.
- Learn and share the energetics and economics of our foreign trade and our national economy.
- Regulate foreign trade of items not produced at equal wage rates or with careful energetics. The only trade that is socially affordable is trade of surpluses, not necessities.
- Prevent passing the buck, the costs and the damages caused by our activities on to people who don't profit from those activities.
- Give legal standing to trees, future generations and our shared surroundings so that passing on of costs to them and exploiting them can be controlled.

The more people know about something, the less chance there is of monkey business. There are ethical dimensions to exchange. Their importance to society is greater than the economic dimensions of exchange, and it is up to us to ensure their observance.



Bill Day's

WOOD STOVES

So much of what we buy is new that we forget that even the most honest salesperson can't know how long a product will last, whether repair parts will be available in 30 years, or how often repair will be needed. It's useful to talk to a mechanic or repairperson—their experience can tell a lot about something you're thinking of buying. Bill Day has been repairing wood stoves in Oregon for two generations. Here's his advice covering stoves commonly available on the West Coast.

The energy panic has lifted. It's no longer necessary to accept shoddy, ill-conceived wood heating equipment. Most manufacturers are slightly exceeding consumer demand with their current production, so a few improved models recently arrived in dealers' showrooms. However, as we have come to expect, the general quality of our available wood stoves is still in a gradual decline. "Public demand" still allows manufacturers to produce inefficient, poor quality wood burners. Until you and I, together with our friends and neighbors, improve our criteria for spending money, we can expect to see sleazy junk on retailers' shelves.

Possibly more important than the choice of stove is the choice of retailer. The price of a wood stove should include competent advice about installation and necessary safety precautions. A salesperson's familiarity with a wide range of products will help him advise you in making your selection. Knowledgeable salespeople are notoriously lacking in chain stores, decorative fireplace shops and retailers selling one brand of stove. Parts and service is as necessary for wood stoves as for other home appliances. You wouldn't consider buying a television or a new automobile from a dealer who didn't service his product. Even though a dealer may not stock parts, he should be able to exhibit parts lists for five- to twenty-year-old models in the lines he sells.

To begin a discussion about wood burning stoves, one must understand the terminology used in referring to the construction materials and finishes employed by manufacturers:

Cast iron is the oldest, most acceptable material used in wood stoves. It is used for firebox liners, grates and stove bodies. Cast iron transmits heat and does not warp or disintegrate easily.

Sheet steel can be combined with cast iron to produce a serviceable stove. Quite often the sheet steel portion of a wood stove can be easily replaced. This material shows heat fatigue sooner than cast iron and when welded together produces a short-lived stove.

Firebrick is used to line fireboxes. It lasts well, does not

transmit heat and is generally a useful tool in constructing a wood stove.

Cast aluminum is being used for doors and handles. This material transmits heat so rapidly that it may be unsafe. Dangerous burns easily result from an accidental touch.

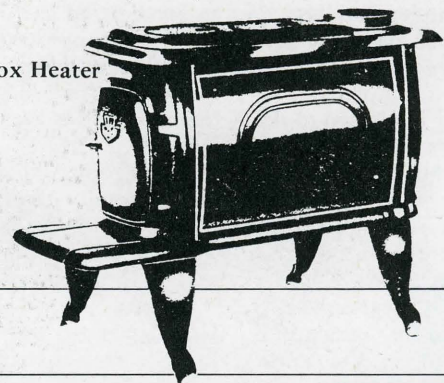
Nickel plating is used as decorative trim on many older stoves. Recently, I've seen some shops attempting to sell chrome-trimmed stoves. Chrome discolors when it gets hot, and its sales are limited to the unknowledgeable by the unscrupulous. Better quality stoves often have a porcelain (glass) finish. Porcelain eliminates a great deal of maintenance as it lasts for many years.

Baked Enamel Paint is used on some new stoves. This finish deteriorates rapidly and is almost impossible to maintain.

Normally, the lowest-priced wood stoves are the expedient "throwaways." They will provide a short term solution to your heating needs. Usually, these stoves are oval drums of lightweight sheet metal. One improvement in this low-priced group is the barrel stove which can be built for \$50 to \$65 on a do-it-yourself basis. (Barrel stove kits from Locke Stove Company retail at \$45.00). The highest priced "throwaways" are the welded box (Earth, Frontier, Fisher, Schrader, etc.), heaters spawned during the '73 heating panic. Many of these stoves were built by franchises who no longer exist.

Upgrading a bit, we find the traditional cast iron box heater. These stoves derive their names from the shape they assume. Box heaters are rectangular in shape and usually can be fed from the front or top. These stoves are the most versatile and utilitarian designs ever to exist. They come in a variety of sizes and are manufactured by many foundries.

MARTIN King Box Heater



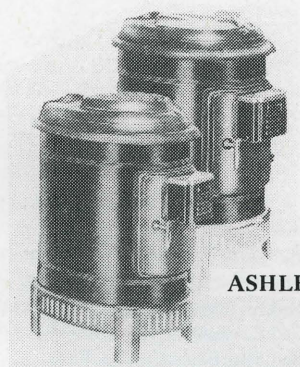
CAST BOX HEATERS

Brand Name and No.	Manufacturer	Usable Wood Length	Parts Availability History	Price	Comments
Arctic 20 25 30	Washington Stove Works	19" 23" 28"	Very Good	\$105 \$140 \$175	Overall, this line is the finest available on the West coast. Washington Stove Works is assembling some units in South Korea and some in Everett, Washington. The import units do not show an appreciable quality loss.
King 624 628	Martin Industries	23" 26"	Good	\$125 \$140	Medium quality, lack of workmanship shows in rough, grainy castings.
Atlanta 27	Atlanta Stove Works	24"	Dubious	\$110	Medium quality, rough, grainy castings, poor, slipshod assembly.
Sears	?		Poor	\$ 90	The poorest quality on today's market. These stoves exhibit every bad feature I've ever encountered in a cast box heater.
Wards	?	26"	Poor	\$ 90	These poor quality stoves appear to have been copied from the King 628. I found microscopic casting cracks, stripped threads on the tension rods and sloppy stove assembly.
Hearthcraft	?	26"	Poor	\$ 90	

THE CONSUMER'S GUIDE

AUTOMATIC AIR-TIGHT HEATERS

Manufacturer	Brand/Model	Firebox Size	Overall Quality	Comments
Martin Industries	Ashley 25HF	25"x17" x23"	Fair	Rough castings, cheap cast aluminum door and latch handles, parts available
Martin Industries	Ashley 23HF	22¼"x16"x21"	Fair	
Martin Industries	King 6600	25"x19"x22"	Fair	Rough castings, aluminum door handles, easier to service, parts available
Atlanta Stove Works	Atlanta 2502	22"x17"x23¼"	Poor	Rough castings, small feed doors, confusing draft controls, spasmodic parts availability



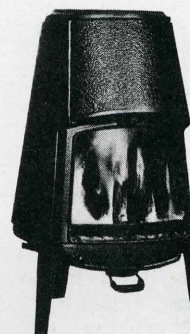
ASHLEY Air-Tight Heater

A journey to the \$200 price class brings the improved air-tight heaters into view. Gasket-lined doors and automatic air inlets are featured on these low-priced efficiency-oriented stoves. By using less wood and wood storage they reduce the labor necessary to heat your home.



WASHINGTON STOVE WORKS
Parlor Stove

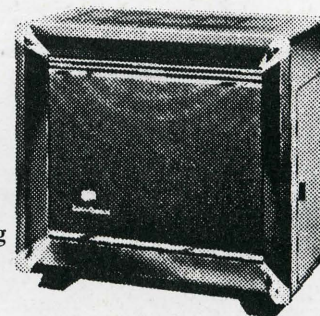
Nostalgia buffs can enjoy wood heat while using an older-style parlor stove. Only two quality units are available on a nationwide basis. Most of the parlor stoves sold today are junk imitations of some domestic stove. The better quality parlor stoves are produced by Washington Stove Works and Portland Stove Works. On the west coast, I've seen some very shoddy copies exhibited by Radke Sales, Montgomery Ward and Hearthcraft Industries. At Montgomery Ward, the salesman tried to convince me that his crude monstrosity had been built by Washington Stove Works, when in fact it was imported by Hearthcraft Industries.



JØTUL Convertible and Classic



As wood fuel advocates become more serious, the availability of cast iron Scandinavian stoves has improved. These units boast the finest quality assembly, efficiency and design available today. Jøtul has the best organized dealer service organization. Most of these stoves are available with a beautiful porcelain finish which reduces future maintenance.



LOCKE Warm Morning

A large percentage of wood stove sales are in the "cabinet" or "circulator" styles. These stoves have an external jacket surrounding the fire chamber. Two to five inches of air space separates the outside jacket from the fire chamber. This design allows for extra safety and promotes convection air movement for more even heat distribution. Again, there is no rival for the "Warm Morning" in this year's selection. Autocrat has improved upon their previous models. I think Sears Roebuck should be ashamed to market their sleezy abortion.

AUTOMATIC WOOD CIRCULATORS

Manufacturer	Brand Name	Model No.	Firebox Dimensions	Firebox Liner	Exterior Finish	Parts Availability History	Rating (5=Best)	Price	Comments
Martin Industries	Ashley	C60	23"x14"x29"	1" Brick	Paint	Good	3	\$445	Fair quality, slipshod assembly, aluminum door handle
Martin Industries	Ashley	C62	19½"x13½"x23"	Cast iron	Paint	Good	3	\$390	Same as above
Autocrat Corp.	Autocrat	FF76	25"x14½"x20½"	Cast iron	Paint	Good	3	\$390	Good quality, improved door hinges and latches, front loading, lightweight external jacket, includes two joints of heat-shield pipe
Autocrat Corp.	Autocrat	6724	25¼"x14½"x20½"	Cast iron	Paint	Good	3	\$322	Medium quality, lightweight external jacket
Martin Industries	King	7801B	18¾"x14-5/8"x25¼"	1" Brick	Porcelain	Good	3	\$390	Fair quality, construction similar to Ashley C62, parts available
U.S. Stove	Sears Roebuck	8405N	24½"x10½"x24½"	1" Brick	Paint	Terrible	0	\$235	Very poor quality, sheet steel firebox door & door frame, inoperable door latches
Autocrat Corp.	Montgomery Wards	5710	27"x13"x25½"	Cast iron	Paint	Poor	2	\$279	Poor quality, lightweight external jacket, front loading door
Locke Stove	Warm Morning	701B	23½"x10½"x29½"	2" Brick	Porcelain	Very Good	5	\$490	Excellent quality, extra heavy grates and liners, finest doors and gaskets, long lasting appearance, automatic thermostat is easier to adjust

AUTOCRAT Americana



Model 76FH

Worthy of mention is the Autocrat "Americana." This stove has the appearance of an open front, Franklin-style heater. With the doors closed, it becomes an efficient circulator. It's my opinion that this wood fireplace/heater will replace many of the junk Franklins in people's homes.

—BILL DAY

Author's Note:

The wood stove market is rapidly changing scene. Check future issues of RAIN for product update information.

MANUFACTURERS

Riteway Manufacturing Co.
(Riteway)
P.O. Box 6
Harrisonburg, VA 22801

Locke Stove Co.
(Warm Morning)
114 W. 11th St.
Kansas City, MO 64105

Portland Stove Foundry Inc.
(Atlantic, Monitor)
57 Kennebec Street
Portland, ME 04104

United States Stove Co.
(Wonderwood)
South Pittsburg, TN 37380

Monarch Range Company
(Monarch)
Beaverdam, WI 53916

Calcinator Corp.
(Wood Chuk)
Bay City, MI 48706

Shenandoah Manufacturing Co. Inc.
(Shenandoah)
P.O. Box 839
Harrisonburg, VA 22801

Washington Stove Works
(Arctic, Olympic)
P.O. Box 687
Everett, WA 98201

Martin Industries
(Ashley, Cameron, Martin, King, Sun)
1604 17th Ave., S.W.
P.O. Box 730
Sheffield, AL 35660

Atlanta Stove Works, Inc.
(Atlanta)
Atlanta, GA 30307

Autocrat Corporation
(Autocrat)
New Athens, IL 62264

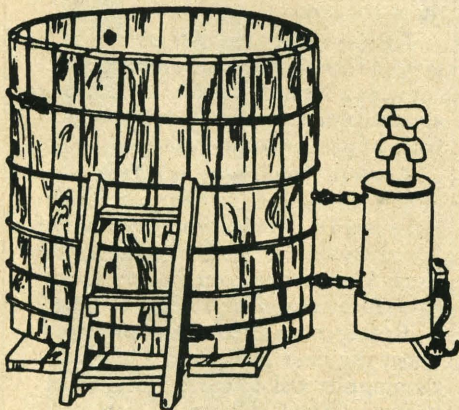
STRETCH YOUR ENERGY and COVER YOUR BETS

Space heating and water heating equipment that can switch between different fuel sources is becoming available as energy costs continue their climb. The devices work on two principles: *Cover Your Bets* (be able to switch to alternatives when one fuel is unavailable or too costly) and *Stretch Your Resources* (use as much renewable resources as possible to reduce the rate at which we use up our fossil fuels).

Depending on solar energy for hot water heating is a lot easier when small wood, gas or electric demand heaters are available to raise the water the final step to desired temperatures when there isn't enough sunshine available. Similarly, more people are converting to burning wood since combination wood/oil or wood/gas units are available—the oil can be used to ignite the wood and to heat the house when people are away or too tired to deal with wood. Some of the units that are available:

Spring Mountain Hot Tubs, Inc.
2617 San Pablo Ave.
Berkeley, CA 94702

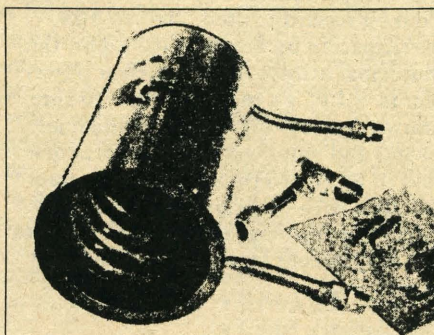
Produces copper coil convection heaters for hot tubs, operating on propane, natural gas or electricity to supplement solar heating. Larger convection heaters available also for use without solar panels, as well as redwood hot tubs. Brochure and price list available.



Blazing Showers
P.O. Box 327
Point Arena, CA 95468

Produces stovepipe water heaters for wood stoves (RAIN, July 1976) and firebox waterheaters for efficient woodstoves (that don't send so much heat up the stovepipe). Soon will have available a solar water heating system to use in conjunction with the wood heat—a natural combination as in many areas there is usually need for the woodstove

anyhow when there's not enough sunshine to heat the water. All these units can be made yourself pretty easily. Someone (you? us?) should put together some simple how-to guides. Blazing Showers has one for their stovepipe heaters.



*Above: Contents of
Blazing Showers Stovepipe
Hot Water Heater*

1. Manual
2. Storage tank adaptor
3. Stovepipe heating unit

Wood and wood/oil furnaces are becoming available again in the U.S. Some claim high efficiency, but beware—the efficiency of wood burning isn't the same as the efficiency of the whole system. Few people put furnaces in their living rooms, which means that heat radiated from the furnace and distribution systems frequently ends up heating a basement, crawlspace, unused rooms or the sky instead of you. Some of the wood/oil, wood/gas furnaces available in the U.S. are:

The Yukon
Wilson Industries, Inc.
St. Paul, MN 55114

This furnace is being specified now on many Indian reservations in Minnesota, North Dakota and Alaska. Wood, wood/oil or wood/gas units. Forced-air space heating.

HS Tarm
Tekton Design Corp.
Conway, MA 01341

Made in Denmark. Hot water space heating and water heating from wood, coal, gas, electricity or oil, with automatic switching between fuels.

Len-Jay Furnace Co.
Underwood, MN 56586

A wood-burning furnace designed to add on next to an existing oil or gas furnace, sharing blower, ducts and chimney.

Riteway
Marco Industries, Inc.
P.O. Box 6
Harrisonburg, VA 22801

Modern-Aire Wood or Wood-Oil Furnace
Modern Machine and Welding
2307 Hwy. 2 West
Grand Rapids, MN 55744

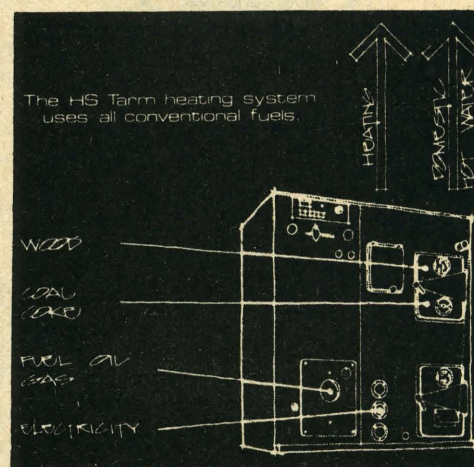
Richard Hill
Department of Industry
Cooperation
Boardman Hall
University of Maine
Orono, ME

Designed experimental high-efficiency wood furnace installed in conjunction with a solar heating system in the new Maine Audubon Society Headquarters. The furnace is designed to transfer so much of its heat to the solar storage unit that a small fan is necessary to pull the flue air out of the chimney. Water in the wood that is converted to steam in burning is recondensed in the heat-exchanger, recovering significant amounts of energy.

Across our northern border can be found more wood furnace manufacturers. Three Canadian companies, Newmac, Duomatic and Lunenburg Foundries, manufacture combination wood-oil furnaces. Regular wood furnaces are manufactured by Valley Comfort, Fawcett and Lunenburg Foundries. Add-on wood stoves that attach to existing oil furnaces and utilize their fans are made by Hallmack Heating Ltd. Contact:

Bruce McCallum
Conserv Society News
512 Blvd. Wilfred Lavigne
Aylmer, Quebec
J9H 3W3 Canada

for more information. (TB)



GOOD THINGS

Creative Meditation and Multi-Dimensional Consciousness, Lama Anagarika Govinda, 1976, \$4.95 from:

Quest Books
Theosophical Publishing House
P.O. Box 270
Wheaton, IL 60187

Govinda's earlier book, *The Way of the White Clouds*, had more impact on me than all of the other writing on spiritual or consciousness developments I've seen. His clear, perceptive experiences seemed to echo in my bones and mesh with my own experiences. I haven't been in a quiet enough space to absorb much of his new book yet, but a number of the essays on time and space in it were published in *Maincurrents* a couple of years ago. They contained his usual ability to lift us out of the conventions of how our society thinks and perceives into broader and probably more useful ways of sensing, describing, and acting. The sections I have read contain a lot of wisdom for those who would give up the world in their search for spirituality and higher consciousness. "To a God the finite should be as much a necessity as to man the infinite. To regard differentiation and individuality as mere accidents of nature or as aberrations of the original purity is [to ignore] the only reality we can speak of . . . because only what "acts" is real in the sense that it affects us and can be experienced." (TB)



The Sweater Book, by Judith Glassman, 1976, \$4.95 from:

Quick Fox
33 West 60th
New York, NY 10023

At last a book of 35 sweater patterns for men, women and children that is real: "If you want a subtle mohair sweater (if there is such a thing), don't choose this color which looks like cotton candy gone berserk. . . . It's also hard to rip out, so if you make any mistakes, you'd probably best learn to live with them." The people in the pictures look like they really own the sweaters. (LdeM)

"How Redlining Affects Seattle," in the *Public White Paper-Bulletin*, Vol. 1, No. 3, edited by Nicholas Licata, \$5 per year (sample copy free with self-addressed, stamped envelope) from:

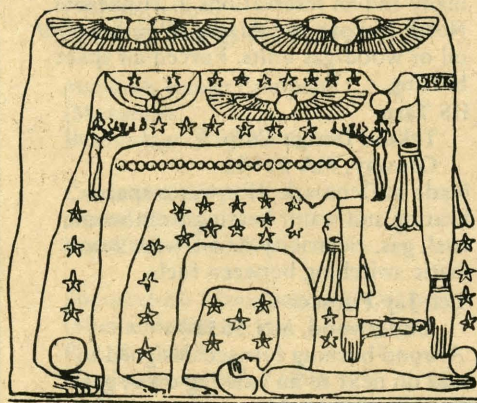
Seattle Information Project
P.O. Box 12002
Seattle, WA 98112

If this S.I.P. paper is as effective as their previous ones on nuclear power vs. energy conservation, redlining will end very soon in Seattle. "Does Seattle Need Nuclear Power?" (Vol. 1, Nos. 1 & 2) was a major reason why the Seattle City Council recently voted "no" to 10% participation by Seattle City Light, the municipal utility, in two nuclear power plants. S.I.P. is a model of how to turn knowledge into information which activates and empowers citizen participation in local government. Future issues will deal with other problems which affect the financial ability of all families to enjoy decent housing and neighborhoods. (LJ)

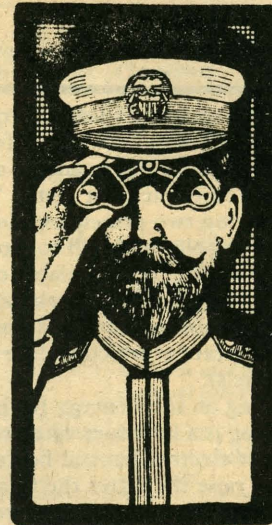
Moon, Moon, by Anne Kent Rush, 1976, 400 pp., \$7.95, from:

Random House
201 East 50th
New York, NY 10022
or
Moon Books
P.O. Box 9223
Berkeley, CA 97409

In the couple of days this book has been around, each of us has picked it up, leafed through it and settled down into a particular section. Lee even read aloud Astronaut Jim Erwin's account of his mystical experience going to the moon. It is a beautiful book—full of poems, cosmologies, calendars, histories and images about the moon from every culture. You will want to move slowly and go back often to this loving collection of our long-neglected feminine, intuitive, mothering side. As Mao said, "Women hold up half the sky." (LdeM)



the goddess Nut holding up the sky



Northwest Habitat Conference, Dec. 10, 11, 12, Spokane, Washington

Whither Habitat and the issues discussed at the U.N. Conference on Human Settlements held in Vancouver, British Columbia, Canada, last June?

One follow-through is a conference being sponsored by the Northwest Regional Foundation (NRF), funded by a grant from the U.S. Office of Education under the Environmental Education Act.

People from Washington, Idaho, Western Montana and Western Canada will be getting together for three days to teach and learn about community. It is an opportunity for people in the region to get to know each other and share concerns.

NRF is suggesting that groups of 5-6 people from individual communities come as a "learning team." Mini-grants are available to teams to defray the costs of participating in the conference.

Keynote facilitators are David Morris, of the Institute for Local Self-Reliance; Dr. Shirley Jones, School of Social Welfare, State University of New York/Stonybrook; and Robert Theobald, futurist and consultant to NRF.

Resource materials being prepared under the same grant are a film, "A Community Called Earth," and print packets, "The Challenge of Habitat."

For information on the conference, registration, mini-grants to teams, and resource materials, contact:

Northwest Habitat Conference
Northwest Regional Foundation
Box 5296
Spokane, WA 99205
509/455-9255

Donald Hornbeck, Coordinator
(RE)

SHOW RAIN TO A FRIEND!

We'd like to ask a favor of all you RAIN readers! Help us connect RAIN up with people who can make good use of its treasures. You are an important link in improving our effectiveness.

We want to increase the number of RAIN subscribers to the point (5,000) where the magazine will pay for its production and pay a subsistence salary (\$400/month) to those who put it out. At present your subscription pays for production costs but it doesn't pay any of us. We have to earn money doing other work, which is okay and keeps us honest, but it also means we can't do many things we feel are important.

★ We want to get RAIN out to more people who can make good use of it—not just build up a lot of “readers”—but don't have the time, money or connections to do so.

★ We'd like to be able to train other people to put out publications, to take over RAIN, bring in new views, cover new areas, and replace us so we can get new projects going that can help expand and extend the things we are all working on. But we can't realistically expect every good person to be willing to work an extra job to be able to do RAIN.

★ We'd like to be able to demonstrate that a network-supported information service can be economically self-supporting and can provide a viable alternative to advertisement-supported publications.

★ Having to spend 60-80 hours a week doing other jobs to earn a living and doing all the rest of RAINwork besides writing and information networking means we don't have as much time or energy to do as good a job as we'd like getting new things together for you. It also means we're likely to burn out on doing this, which shouldn't have to happen.

If each present RAIN subscriber would connect up three new subscribers with RAIN, we'd be there. You're the most effective way we can think of to introduce RAIN to new people. You know us, and hopefully find something useful in us, and you collectively know many times more good people than we do that could make good use of RAIN resources. Any other form of locating new subscribers takes money (which ultimately is reflected in subscription costs), lots of our time and isn't either a very effective or right way to grow a network. So give us a hand:

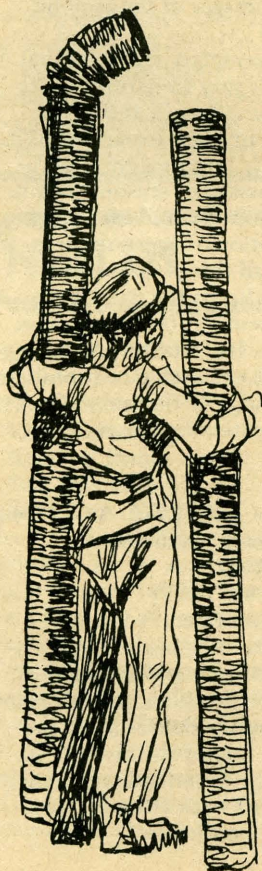
★ Show RAIN to your friends, and get at least three to subscribe.

★ Give a gift subscription to someone who can use it.

★ Clone yourself and subscribe again.

Your personal recommendation of RAIN to a person is important. Without someone they trust suggesting something, most people need two or three different turn-ons before they will really take a careful look at something.

THERE'LL BE A HEAT PIPE IN YOUR FUTURE



Line the inside of a metal tube with a wick from a kerosene lamp, saturate the wick with water, evacuate the tube, seal both ends, and you have a heat pipe. Dip one end in a pot of boiling water and within a few seconds the other end will be too hot to handle.

Basically, a heat pipe is a super thermal conductor that transmits heat by the evaporation and condensation of a working fluid. It can transfer about 1000 times more heat energy than copper, one of the best known conductors and do it with a temperature drop of less than 3°F. per ft. Heat pipes have no moving parts, require no external energy (other than the heat they transmit), are reversible in operation, and completely silent. And, like any piece of tubing or pipe, they are rugged and can stand lots of abuse.

Already in use in medicine, nuclear reactors, space flight and as heat sinks in electronic equipment, the energy crisis and the increasing demand for more efficient use of fuels is prompting renewed interest in heat pipes for waste heat recovery and solar energy collection. Since you'll soon be seeing and hearing more about heat pipes, we've selected a few articles that will introduce you to their theory and applications and listed manufacturers who supply them:

“Heat Pipes: Breakthrough in Thermal Economy?” by Charles Behrens, in *Appliance Manufacturer*, Nov. 1973, pp. 72-75.

“How Heat Pipes Work” by Don Noren, in *Chemical Engineering*, August 19, 1975, pp. 89-91.

“The Heat Pipe,” by G. Yale Eastman, in *Scientific American*, May 1968, pp. 39-46.

MANUFACTURERS:

Sigma Research, Inc.
2952 George Washington Way
Richland, WA 99352
509/946-0663

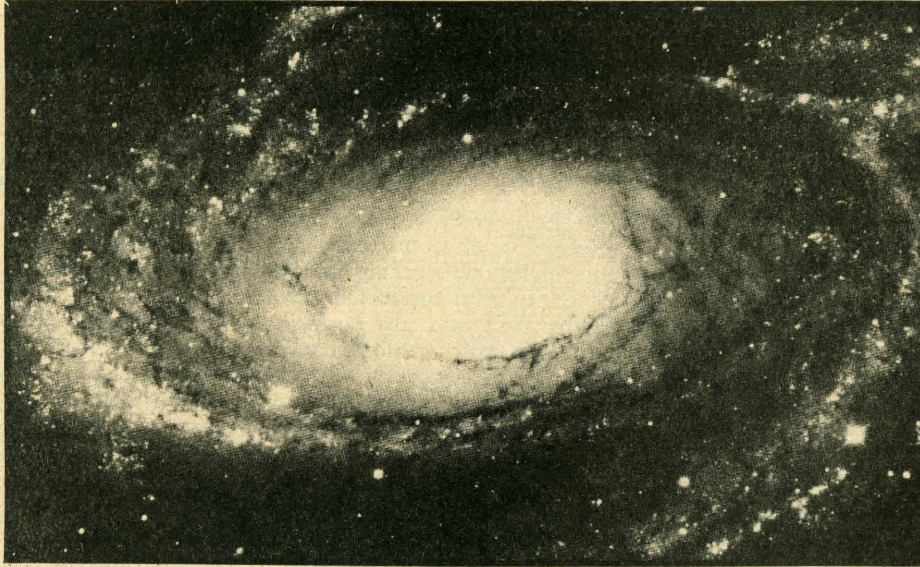
Noren Products, Inc.
3511 Haven Ave.
Menlo Park, CA 94025
415/365-0632

Isothermics, Inc.
Dept. PM, Box 86
Augusta, NJ 07822
201/383-3500

E. B. Kaiser Co.
2114 Chestnut
Glenview, IL
312/724-4500

Acme Manufacturing
7500 State Rd.
Philadelphia, PA
215/338-2850

Bry-Air, Inc.
Rt. 37W
Sunbury, OH 43074
614/965-2974



PLACE

All of us have certain buttons which, if pressed, send up red flags, blood pressures, and bring forth violent ideological outcries. When you talk to a lot of people and keep finding the same panic buttons, you begin to become aware of what could be called societal soft spots—where we feel somehow too insecure about our position and actions to respond normally. One I always used to stumble into was Sewage, though people are changing a lot on that topic. Now, questioning someone's right to mobility runs up the flags faster than questioning their virility, but if you want to get the most defensive, clamshell response, ask most people how much money they make! Or try a couple of others, just for fun: tell someone that Xeroxing is a harmful technology or that we have too many medical services.

If we sniff around a bit when we hit one of those buttons, we can often learn a lot. Mobility, for example, is now an unquestionable, God-given right, to be defended and expanded at every opportunity. We have so long ago lost any awareness of what it means and feels like to have roots, that we cannot imagine or sense any positive potentials of abandoning, either voluntarily or from need, our wandering, mobile lifestyle.

We can immediately sense, though, when someone with the strength of deep roots and strong ties to a place questions our mobility, that they are speaking from an experience we lack and one that gives them a strength we cannot fully understand. Mobility, like all things, has good and bad sides, and

when carried to the extremes of its potentials also creates the extremes of its harmfulness, which brings rise to the desirability of other patterns. Roots and wheels aren't extremes on a continuum; they're different dimensions of experience. The emergence now of desires for rootedness comes more because it can now offer more positive experience than more mobility once you've taken mobility as far as you can go (either as individuals or as a society). A sense of place that arises from living in and loving a place and drawing our sustenance from it gives rise to different and deeper roots than can be gained by any other means. The strength that grows from deep roots in powerful places can be sensed in the speeches and writings of Native Americans as well as many other cultures where people lived close to their land:

Seven Arrows, Hyemeyohsts Storm, 1972, \$6.95 from:

Ballantine Books
201 E. 50th Street
New York, NY 10022

A beautiful expression—in words, pictures and allegory—of the forces of people and nature that flow together through a place, forming and evolving together.

Landscapes—Selected Writings of J. B. Jackson, ed. by Ervin H. Zube, 1970, \$6.00 from:

University of Massachusetts Press
Amherst, MA 01002

J. B. Jackson was editor/publisher of *Landscape Magazine* for 16 years, and his collected essays from that journal and other writings are among the few clear visions of modern America. The night-jeweled cities from the air, the stranger's path through a city, the suburbia of old Rome and New York—Jackson's essays reveal the places of modern America with unequalled clarity.

Era of Exploration, Weston Naef, 1975, \$9.75 from:

New York Graphic Society
140 Greenwich Avenue
Greenwich, CT 06830

Our images and perceptions of ourselves and our world usually change more dramatically and rapidly than the physical places themselves. This fascinating chronicle of the rise of landscape photography in the American West, profusely illustrated with the photographs that make up that revolution, provides an absorbing insight into those changes in perception. Photographs made by three fine photographers, within a two-year period, of the same view of Yosemite and other places, from precisely the same spot create an entirely different feeling of the idyllic beauty, power, awesomeness, quietude or harmony of nature. A record of people affecting landscapes, landscapes affecting people, and the images of both evolving into a new sense of our place in our world.

Two of Wendell Berry's books give a powerful sense of these ancient and nurturing roots:

The Long-Legged House, 1965, \$1.25 from:

Ballantine Books
201 E. 50th St.
New York, NY 10022

A collection of essays on his reestablishing a homestead in the neglected farmlands of Kentucky, this book is filled with beautiful images of the land he knows:

"The most exemplary nature is that of the topsoil. It is very Christ-like in its passivity and beneficence and in the penetrating energy that issues out of its peaceableness. It increases by experience, by the passage of seasons over it, growth rising out of it and returning to it, not by ambition or aggressiveness. It is enriched by all things that die and enter into it. It keeps the past, not as history or as memory, but as richness, new possibility. Its fertility is always building up out of death into promise. Death is the bridge or the tunnel by which its past enters its future."

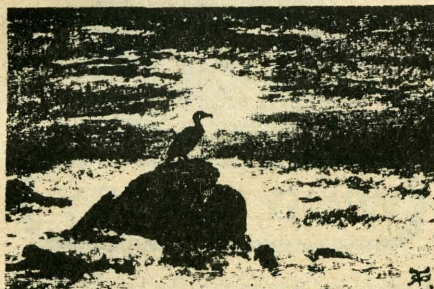
Memory of Old Jack, 1940, \$2.65 from:

Harcourt Brace Jovanovich
757 Third Ave.
New York, NY 10017

A novel of an old farmer's last day, flashing back through his life and relationships with the people and land of his home. His frustrations with so many of the new generations who have succumbed to the lure of the city life is based in his own experience of strength and love received back from his own hard work and simple life.

World Biogeographical Provinces Map,
22" x 38", full color, \$3 postpaid from:
CoEvolution Quarterly
P.O. Box 428
Sausalito, CA 94965

Based on still-accumulating data of plant and animal distributions, this new map indicates a deeper coincidence of geological, biological and cultural regions on a world-wide basis.



CoEvolution Quarterly, \$8/yr., from:
P.O. Box 428
Sausalito, CA 94965

CoEvolution is Stewart Brand's successor to the *Whole Earth Catalog*. It wavered for the last year or so, lacking Brand's former uncanny ability to focus and draw out new trends, ideas and visions. We all get burned out and can't always stay centered on course. But good news! The Fall '76 issue is dynamite! Brand is back in gear and in good form, and his commentary and notes are worth reading by themselves. (I often just read through once for Brand, then once for the rest of the stuff.) *Whole Earth* almost always managed to shake my head up a bit, and it came back together in a new way each time. It's happening again and feels good. A lot of thoughts on success, not apocalypse, and on bio-regions and regional consciousness. The next issue is being edited by Peter Warshall (*Septic Tank Practices*, RAIN

October 1976) and is going to focus on watershed politics, regional thinking and bioregional provinces. Should be good. Maybe you'd better subscribe.

Stewart has been kicking space stations around lately in *CQ*, and we've felt them to be pretty crazy. They probably are, but last night Lee was reading us an account by one of our astronauts of his spiritual conversion on the Moon. (See *Moon*, *Moon* review this issue.) Turns out most of our astronauts had some pretty heavy unprogrammed spiritual/consciousness experiences. Must have freaked out NASA! If that's the case, maybe L-5 is a good idea. Get all those people who want to get above all our problems, send them out into space on a technological adventure and end up with a new spiritual consciousness for our planet. Each thing in its fullness holds the seed of its own demise! Seems the point missed in the L-5 discussions was that the game is cosmic and about consciousness, not about "whole earth" and technological problems/solutions.

The San Francisco Bay area has fermented a lot of intellectual development of roots, regional consciousness, bio-regions, and how to live like a native in your own region. As well, a lot of people are beginning to live and act on such consciousness—numerous creeks once buried in concrete culverts have been uncovered and restored, forests replanted, natural food systems reused. Peter Berg, who disseminates *Planet Drum*—a series of information bundles exploring watershed politics and bio-regionalism (P.O. Box 31251, San Francisco, CA 94131) is editing a book of people's essays in these areas. The *Mussel Group*, Box 31251, San Francisco, CA

94131, is developing information on local human/biosystem relationships, priorities for restoring natural systems and non-exhaustive use of labor and materials for manufacturing and agriculture in the region. Peter Warshall, (Box 42, Elm Rd., Bolinas, CA 94924) is editing the bioregion issue of *CoEvolution*. Gary Snyder, poet and author of *Turtle Island*, continues to write and talk on watershed concerns. Jerry Yudelson, consultant to the California Office of Appropriate Technology (RAIN, October 1976), has been working on restoration projects. Out of all their work is emerging a sense of what real changes in our surroundings and in our heads can be brought about by becoming aware of the places we inhabit.

The Town That Fought to Save Itself,
by Orville Schell with photographs by
Ilka Hartmann, 1976, \$6.95 from:

Pantheon Books
Random House
201 E. 50th
New York, NY 10022

The story of a small town just north of San Francisco struggling with the new/old questions of growth/tourism, prosperity/obscure, peacefulness/prosperity. The "longhairs" get elected to the Public Utilities District and work to design a sewage system that won't encourage expansion, dances are held, babies are born, barns burn down, highway expansion plans are protested. The story unfolds lovingly in a diary format, giving a sense of the people and the lives involved, as well as the political importance of their struggles. A very human account by two people who live there. (LdeM)

HEALTH

Prognosis Negative: Crisis in the Health Care System, David Kotelchuck, ed., 1976, \$2.95 from:

Vintage Books
Random House
201 East 50th
New York, NY 10022

This new Health/PAC (Health Policy Advisory Center) updates *American Health Empire* (1970) for a detailed view of the ills of our American health care system. It is a hefty collection of essays documenting the wheelings and dealings of large hospital systems, Blue Cross, nursing homes, drug companies and government assistance (Medicare, Medicaid, grants and national insurance). It's very depressing reading but useful ammunition. Health/PAC has been doing

substantial work in this area for some time and publishes an excellent bi-monthly *Bulletin*. Write for price information: Health/PAC, 17 Murray St., New York, NY 10007). (LdeM)

Safe Alternatives in Childbirth, Lee and David Stewart, ed., 1976, \$5 from:
National Association of Parents and Professionals for Safe Alternatives in Childbirth (NAPSAC)

P.O. Box 1307
Chapel Hill, NC 27514
919/732-7302

If you are at all interested in the pros and cons of different birthing practices, read this book. It is a collection of papers given at the 1st NAPSAC Conference by doctors, midwives and parents. It contains hair-raising documentation of the generally unmentioned hazards to mother and infant of routine use of drugs, forceps and IVs, as well as the high chances of contracting



serious infections in the hospital. Statistics from studies in California and elsewhere show the increased health and general lack of problems in home deliveries as long as mothers with potential problems are screened out beforehand. There are case studies of several midwives' and doctors' home delivery practices as well as descriptions of several birthing clinics—a step in between

Continued on next page

HEALTH Continued
that could be a good solution for many families. The results, success stories are encouraging: hopefully we're getting back to a time where birthing can be family-centered and treated as a healthy, natural function wherever it happens.

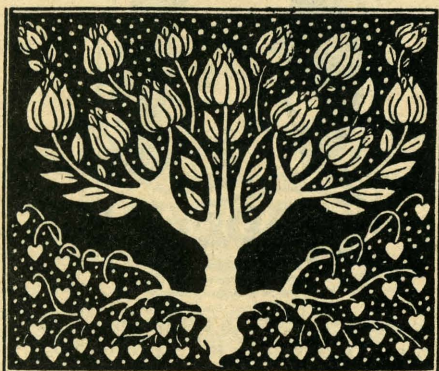
NAPSAC is a network of parents and professionals dedicated to this cause. Contact them for information on how to find helpful professionals in your area or where to learn midwife skills. And consider attending their 2nd conference, March 11-13, 1977, in Chicago. Write for details. (LdeM)

LEARNING

Taking Off, by Jennifer Eis and Don Ward, 1975, \$5.95 from:

Center for Alternatives In/To
Higher Education
1118 S. Harrison Road
East Lansing, MI 48823

In the past several years a great number of colleges and universities have set up living/learning centers where students can arrange work/study programs in all manner of areas—usually non-academic. The choices range from assisting in a day care center to working in a migrant camp or living with a family in Denmark. The first half of the book is the story of the setting up of one such center at Michigan University. It contains some thoughtful observations about such things as group process and filing systems that would be useful to any sort of non-traditional organization. The second half is a very thorough listing of programs and contacts all over the world for a wide variety of apprentice, exchange and internship programs. A useful guide for anybody wanting to burst out of the standard academic pattern to experiential learning. (LdeM)



No More Public School: A Manual for Innovators, by Hal Bennett, 1972, \$2.95 from:

The Bookworks
1409 Fifth St.
Berkeley, CA 94710

I'm more and more convinced that I

will not be able to put a child of mine into public school, so I wonder about finding or starting a good alternative. This book gives one ideas, possibilities and courage—particularly for a small endeavor (5-10, 15 kids). He describes it best himself: "This book tells how to take your child out of public school and how to educate him at home yourself. It tells how to put your own school together, which means legalities, curriculum and business stuff and minding the store once you've started. It tells about solutions for when you're in trouble . . . but it does not flirt with dreams for an easy Utopia." (LdeM)

Perceived Needs

How do we teach people new things and new ways when they have holes in their mental models—when they are not receptive?

"A man receives only what he is ready to receive, whether physically or intellectually or morally, as animals conceive at certain seasons their own kind only. We hear and apprehend only what we already half know. If there is something which does not concern me, which is out of my line, which by experience or by genius my attention is not drawn to, however novel and remarkable it may be, if it is spoken, we hear it not, if it is written, we read it not, or if we read it, it does not detain us. . . ."

—H. D. Thoreau, "Journal"

January 5, 1860

(Trudy Johnson-Lenz)

Sixth Annual Composting & Waste Recycling Conference Proceedings, May 11-14, 1976, Portland, Oregon, in *Compost Science*, July-August 1976 (Part One) and Sept.-Oct. 1976 (Part Two), \$1 each from:

Compost Science
Rodale Press
Emmaus, PA 18049

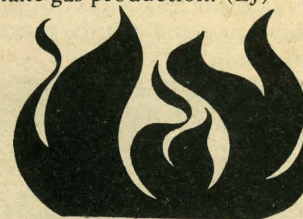
Part One includes the Ore Plan, for neighborhood recycling via source separation, the "sewerless society," the Farallones composting privy; Part Two includes reports on the Oregon Bottle Bill, compost toilets, municipal composting and leaf banking, land application of sewage sludge as well as the usual abstracts of useful publications. (LJ)

LC Science Tracer Bullet: Organic Fuels (TB 74-6), free from:

National Referral Center
Science & Technology Division
Library of Congress
Washington, DC 20540

A guide to the literature on the technology and economic feasibility of con-

verting organic materials such as garbage, animal wastes, sewage sludge and waste paper to oil, gas and other fuels. The NRC can also supply, if asked, a computer printout of information resources relative to bioconversion for methane gas production. (LJ)



WIND ENERGY

Windpower Testimony, by Lee Johnson of RAIN and Ecotope Group, at Pebble Springs Nuclear Plant Hearings, ask for free reprint no. 136 from:

Senator Mike Gravel (D-Alaska)
U.S. Senate
Washington, DC 20510

Sen. Gravel entered this information, designed for use by other nuclear power intervenors, in the Sept. 21, 1976, *Congressional Record*. It contains the most useful points of argument to mention when suggesting the use of large wind-electric systems, with extensive references to support them. If you're pressed for time, most large public and university libraries get the *Record*. (LJ)

"The Trouble at Plum Brook," by Bill Ward, in *Windustries*, Vol. 1, No. 1, Autumn 1976, \$10 to individuals, \$15 to institutions, for 4 issues per year (\$2.50 single copy) from:

Great Plains Windustries, Inc.
Box 126
Lawrence, KS 66044

Excellent article on how NASA designed the nation's only existing large wind generator so ineptly that it is now shut down after only 57 hours of operation. Should be read by all Americans and especially all windpower enthusiasts. This well-researched story covers how NASA experts came up with "a machine whose blades (fatigue-susceptible aluminum) and hub (fixed, no coning) and tower (lattice type, with stairs) are not only mismatched with each other, they are *perfectly* mismatched," despite the fact that they had the experience of the Smith-Putnam and the Hutter-Allgaier machines to go on. Mr. Ward suggests that a competition among private industry followed by a guaranteed number of sales and low interest loans, such as used to build hydro-electric dams in the Pacific Northwest and the Tennessee Valley, would be a better and faster solution than the ERDA/NASA "demonstration series" approach. (LJ)

SOLAR ENERGY

Solar Energy for Space Heating and Hot Water, document SE-101, single copies free from:

ERDA Technical Information Center
Box 62
Oak Ridge, TN 37830

Provides some of the cost and savings figures that consumers and builders need to decide whether or not to use solar space heating and water heating equipment. Charts, graphs and drawings help the reader decide if solar equipment would be economical for a home or building in his particular climate zone. Excellent handout for state energy offices, environmental groups and solar conferences. *Solar Energy and Conservation for Home Heating and Cooling* (EDM-817) is a useful companion piece which is also available. It explains how solar and conservation technologies can be combined to help homeowners save money. Ask for their publications list. (LJ)

Solar Energy Heat Pump Systems for Heating and Cooling Buildings, Workshop Proceedings, June 12-14, 1975, Pennsylvania State Univ., edited by Stanley F. Gilman, ERDA Document No. C00-2560-1, available from:

ERDA Technical Information Center
P.O. Box 62
Oak Ridge, TN

The reports in these proceedings cover everything you ever wanted to know about heat pumps of all kinds and how they relate to solar energy, utility load factors and energy conservation. An excellent refresher for architects and engineers, it has introductory material on what a heat pump is and does for the beginner as well. (Courtesy Dr. Fred Morse, ERDA Solar Heating & Cooling Branch Chief). (LJ)

Solar Utilization News—SUN, monthly, \$8 per year to individuals, \$15 to libraries or industry, from:

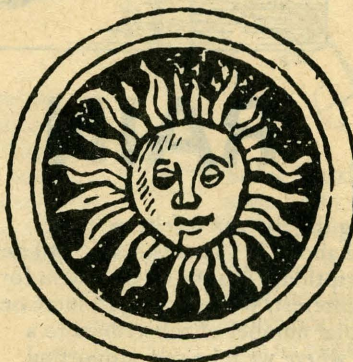
Alternate Energy Institute
P.O. Box 3100
Estes Park, CO 80517

Rachel Snyder, former editor of *Solar Energy Washington Letter* and *Solar Energy Industry Report*, has gotten off to a fine start as *SUN*'s editor. It's inexpensive and well-done, with names and addresses for further information where appropriate. Ask for a free sample copy and send the names of a few friends who are also interested in solar energy. (Suggested by Ken Smith, Ecotope Group) (LJ)

Solarscope, free to dues-paying members, \$1 single-copy, from:

So. Calif. Solar Energy Assoc.
202 "C" St.—11B
San Diego, CA 92101

This regional chapter of the ISES American Section puts out an excellent 16-page newsletter full of useful solar info, with a Southern California focus. Their *Western Regional Solar Directory* covers manufacturers, engineers, architects, contractors, distributors and consultants in California, Arizona, Nevada and Hawaii with over 500 listings. It's \$2.35 postpaid (\$1.35 to members) from SCSEA. (LJ)



Colorado Solar Energy Association News, free to dues-paying members of:
Colorado Solar Energy Assoc.
University of Colorado at Denver
1100 14th St.
Denver, CO 80202

CSEA is just now completing its formation as a regional chapter of the American Section of the International Solar Energy Society. Their Sept. 1976 *News* contains much information of regional interest and a membership questionnaire. This is a good spot to watch for Colorado's solar developments. (LJ)

CONSERVATION

Keeping Warm for Half the Cost, Phil Townsend and John Colesby, 1975, available for \$3 U.S. from:

Conservation Tools & Technology
143 Maple Road, Surbiton
Surrey KT6 4BH ENGLAND

This is by far the best homeowner's guide for reducing energy use in the home that we've seen since Eugene Eccli's *Save Energy, Save Money*. Belts are tighter in England, and they have a stock of houses several hundred years old that require thoughtful techniques for insulating, so the British have a lot of experience we can learn from. The book's best new information seemed to be a section on clear how-to information

for making insulating window shutters and storm windows, and ideas for commercial products available in England that could be usefully produced here: sheetrock laminated to styrene insulation for direct application to existing walls; rigid foam insulating tiles to apply to ceilings where access to rafter space is difficult; foam panels covered with masonite for insulating existing concrete floors; kits for glass storm windows. Good detailed instructions, clear illustrations and lots of practical know-how for dealing with difficult or unusual situations. Insulation levels suggested should be at least doubled for the U.S. (and probably for England), but otherwise pretty directly applicable here. (TB)

Project Retro-Tech: Instructor's Kit for Home Weatherization Course, Conservation Paper No. 28A, available from:

Director
Office of Weatherization for Low Income
Federal Energy Administration
Washington, DC 20461

A beautifully done series of lesson plans designed to help supervisors of work crews engaged in home insulation, storm window installation and weatherstripping. Also, vocational-technical schools will find these four manuals very useful in training the large cadre of skilled technicians specializing in weatherizing homes who will be needed as homeowners turn to retrofit measures for relief from higher energy costs. (LJ)

"The Bonneville Power Administration Energy Conservation Study" by Skidmore, Owings & Merrill, in the *BPA Role Environmental Impact Statement*, Document No. 256766/AS, is available for \$10.00 from:

National Technical Information Service
U.S. Dept. of Commerce
5285 Port Royal Road
Springfield, VA 22161

The report concludes that 1) electrical energy needs forecasted for 1995 could be reduced 33% by conservation, 2) the energy made available by investments in conservation is six times less expensive than energy delivered by investments in new thermal plants, 3) more jobs would be created by these conservation programs than would be by building new thermal plants, 4) these conservation measures are in limited use today, and their broad application would have no significant effect on comfort or customary life style, and 6) environmental quality would be improved. An excellent, 4-page pamphlet detailing the conclusions is available free from: Forelaws on Board, Senator Building, Portland, OR 97204 (LJ)

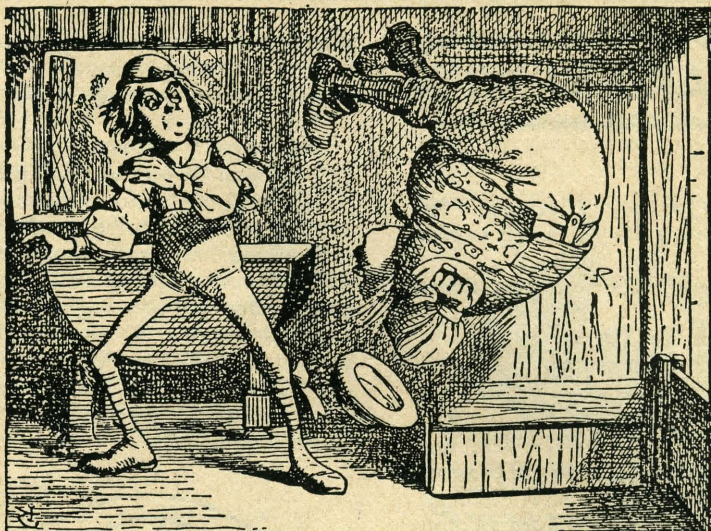
"Why Not Just Build the House Right in the First Place?" by Raymond W. Bliss, in *Bulletin of the Atomic Scientists*, March 1976, pp. 32-40.

A simple yet powerful conventional analysis of the individual and national energy- and dollar-savings possible via direct solar plus energy conservation home design, using Boston, Mass. climate examples.

A Naturally Air-Conditioned Building, by Harold Hay, \$1.00 plus stamped, large self-addressed envelope from:

Skytherm Processes & Engineering
2424 Wilshire Blvd.,
Los Angeles, CA 90057.

Introduction to the "water-bed roof for thermal mass" concept, which heats and cools the Hay-designed Atascadero, California, home.



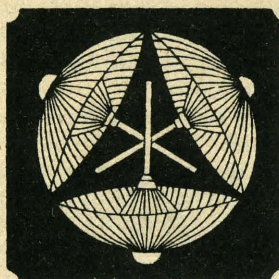
RAIN DROPS

NEW ADDRESSES

Dulcie Brown, author of *Community in Oregon* (RAIN, October 1976), now lives at 2646 N. First, Fresno, CA 93703.

Intermediate Technology Development Group (ITDG) has relocated all of its operation back at: 9 King Street, Covent Garden, London WC2E 8HN, England (same now as IT Publications).

TOOL, the Dutch appropriate technology center, authors of *Lectures on Socially Appropriate Technology* (RAIN, May 1976), has a new address: Stichting TOOL, Mauritskade 61a, Amsterdam, The Netherlands.



RAIN's office is at 2270 N.W. Irving, Portland, OR 97210. Phone (503) 227-5110.

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During the past six weeks we've received about 175 renewals and 130 new subscriptions. Thanks to all of you for your interest. We're aiming to increase our total number of subscribers to a point where we'll be self-supporting. Tom has written about that in this issue. See "Show RAIN to a friend."

About renewing your subscription: we're starting to code our mailing labels with a number indicating the last issue to be received before expiration. For example, "III-10" means that Volume III, No. 10 will be your last issue. Many subscribers' labels haven't yet been coded, but it should happen within the next couple of months. In any case, you'll get two fairly obvious reminders to renew: a letter with a renewal form, then your last issue, marked "renew now, this is your last issue." Your early renewals are appreciated. Also, if you renew promptly you won't miss any issues and I won't have to choose between (a) keeping your file cards in case you renew after a few months and (b) throwing them away only to have to re-type them later. If you renew without using our renewal form with your label on it, please include the mailing label from a recent issue. I've found that many people change their name or address without realizing our records are different, and it gets hard to track them down.

On our subscription blank we're now including an option of First Class Mail within the USA. It seems that the farther you are from Portland, the longer it takes RAIN to get to you and that some of you would like to be able to get it sooner. We expect that this issue will have been mailed by November 8, in case you'd like to see what

your delivery time is (this applies only to subscribers on our list as of October 22).

If you'd like back issues or any of our other publications, you can write now for a list of those available, or wait till the next issue (we can't guarantee prices or availability of items if you use an old blank). As our list of other publications has grown fairly long, we'll be printing it in alternate issues rather than every month as we have before. If you're a subscriber who missed any issues because you moved without notifying us, you'll need to order them by the same process (see "Moving Soon?" box).

When we raised our prices in May, we eliminated the "institutional" subscription, which provided for three copies of each issue. If you would like multiple copies to the same address each month, write and ask about special rates.

If you write to us at RAIN and don't want your letter printed as you wrote it, please say so. We don't print all letters, but if one is pertinent to a topic, we'd like folks to see it. And if you write to anyone we mention in RAIN and want an answer, please include a self-addressed, stamped envelope, often abbreviated SASE.

Comings and goings: we have another Johnson at RAIN now. Marcia Johnson is doing layout for the magazine and some of our other publications. She is not related to Steve or to Lee (who are not related to each other, either; and, while I'm identifying us, I should add that Lane is a woman). Lane's sister, Lauri deMoll, will arrive tonight to be here helping for a while. (AM)

New RAIN Publications:

Employment Impact Statement

\$.50 postpaid

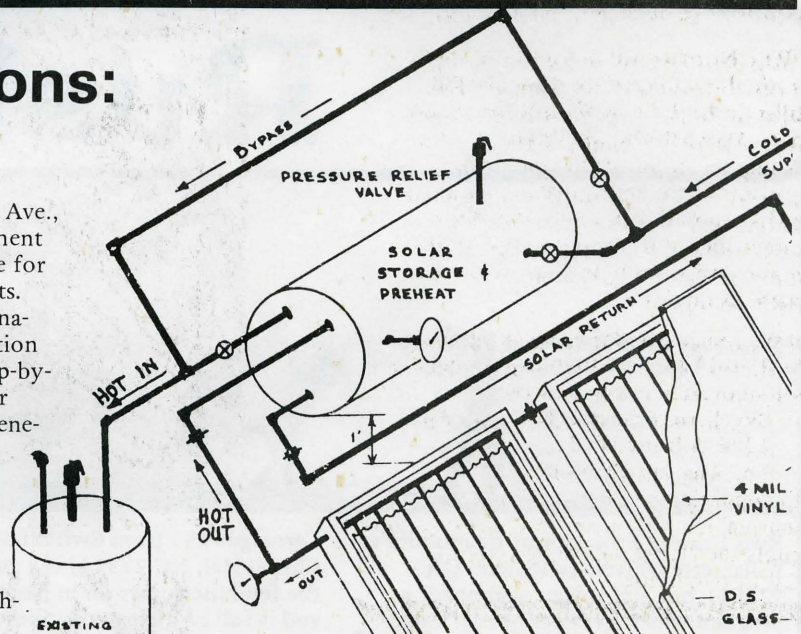
The Center for Growth Alternatives (1785 Massachusetts Ave., N.W., Washington, DC 20036) published a short employment impact statement last spring for community groups to use for evaluating the claims of developers and growth proponents. We've expanded the format to include evaluation of alternatives and more community impacts, added a resource section and printed up a bunch. We think it provides a simple step-by-step way to figure the impacts of a new industry, consider what other options might be available and compare the benefits of the different options.

O.A.T. Bibliographies

\$.50 each postpaid

Over the last few months we've put together a series of resource lists for the California Office of Appropriate Technology (P.O. Box 1677, Sacramento, CA 95808). They're annotated, run two to five pages each and contain overviews, technical evaluation, models, how-to and access information. They're available from O.A.T., and we have a limited number available to RAIN people for \$.50 each to cover printing and mailing. Topics available are:

- Direct Solar Heating/Cooling
- Energy Conserving Landscaping
- Wind Energy
- Solid Waste Utilization
- Drying Up the Toilets
- Diseconomies of Scale
- Bioconversion: Methane Production
- Weatherizing: Home Insulation
- Costs of Urban Growth
- Natural Pest Control
- Appropriate Technology
- Low-Cost Construction

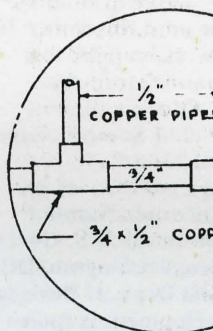


Solar Workshop Manual

Sept. 1976, by Ken Smith, Lee Johnson, Rollin Francisco, \$3.00 postpaid.

15 pages of step-by-step, photo-illustrated instructions, material and tool lists and plans for a do-it-yourself solar hot water heating system with 60 sq. ft. of solar collector; adaptable to existing gas or electric home hot water heaters and costing \$250-\$350 wholesale in materials. It grew out of the regional workshops conducted around the Pacific Northwest by Ecotope Group and RAIN and also includes information and helpful hints on how to organize such workshops in a section titled "Appropriate Technology Transfer." It will be revised periodically as new information develops.

● Send self-addressed, stamped envelope for list of other publications and back issues available from RAIN.



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Rush



Russ Beaton, Professor of Economics at Willamette University (Salem, OR 97301), has just gotten a grant for a program which he describes as "essentially alternative futures surrounding the steady state/Limits to Growth theme." Interested? Talk to Russ, 503/370-6310 □ Sad news from Idaho, Carla and Michael Emry's School of Country Living was wiped out by a disastrous flood and landslide August 2nd. There was no insurance, and the school will close. Says Carla, "I can really see a blessing in it. I'm looking forward to becoming a private person again." (Thanks to the *Alternative Market Newsletter*) □ Cambridge Documentary Films (P.O. Box 385, Cambridge, MA 02139) has two very fine films: *Taking Our Bodies Back: The Women's Health Movement* (Rental \$39 for one day, \$59 for two) and *The Barefoot Doctors of Rural China*, by Diane Li (rental \$75 for one day, \$100 for two) □ Rural America (1346 Connecticut Ave., N.W., Washington, DC 20036) is convening a Second National Conference on Rural America, November 15-16 at the Savoy Hotel in Des Moines, Iowa. Issues will include strip mining, Indian lands, rural health care and the protection of the family farm □ *Whole Women's*

Carologue (\$3 from Switchboard, Inc., Chapel Hill, NC 27514) is a guide to the feminist goings-on in North Carolina and is full of dialogue and resources □ The Illinois Division of Energy is sponsoring four 3-day workshops on solar house design: November 4-6 at Chicago's Circle Campus, November 11-13 at Southern Illinois University in Carbondale, November 16-18 at Bradley University in Peoria, and November 30-December 2 at University of Illinois (Champaign-Urbana). Professionals \$50, students \$10. Contact: Illinois Division of Energy, 222 South College St., Springfield, IL 62706 □ Visit *A Lesser-Used Park* is a guide to lesser-known places in America's National Park System. 70¢ from the U.S. Government Printing Office, Washington, DC 20402 □ The Illinois Dept. of Business and Economic Development is sponsoring "Solar III," a one-day event at Northwestern's campus, November 20. Contact: Eileen Johnston, 505 Maple Ave., Wilmette, IL 60091 (312/251-4386) □ Try the *New York Times Manhattan Coloring Book*, by William Rippner, David Byrd and Paul Goldberger, \$3.95 from Quadrangle/The New York Times Book Co. (10 E. 53rd St., New York, NY 10022). Tom likes it (but then he's an architect). All the

landmarks are there with some history too. □ If we can't afford to get too far from home on our "camping" trip, in the near future our problems could be solved. High-Rise Campsites, Inc. has opened the world's first skyscraper campground in New Orleans. It's a 20-story, open-sided building with 240 campsites, each carpeted with Astroturf and equipped with a utility hookup and deck furniture. All you'll have to do is give the guard in the lobby \$11 a night for each vehicle, park your car on a lower floor and then watch your trailer or motor home be hoisted up to the appropriate slot on a turntable-like platform, while you follow in elevated comfort (thanks to Cathy Macdonald and *NorthCountry Life and Times*) □ The Eastern Oregon Community Development Council is helping Eastern Oregon State College build an "Energy House" modeled on the "Ouroboros" House at the University of Minnesota. They plan to demonstrate energy conservation techniques, composting toilets, biodynamic gardening and solar water heaters at minimum and would appreciate suggestions on what else to include. Share your ideas with: Lynn Schoessler, EO CDC, 801 Adams Ave., La Grande, OR 97850, 503/963-3186 □



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